

## **APPENDIX B**

**Regional Water Quality Control Board Master Waste Discharge  
Requirements Order Number R3-2004-0099.**

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL COAST REGION  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401-7906**

**WASTE DISCHARGE REQUIREMENTS ORDER NO. R3-2004-0099**

**NPDES NO. CA0049964**

**WDID No. 3 430100001**

**Proposed for Consideration at September 10, 2004 Meeting**

**FOR**

**SOUTH COUNTY REGIONAL WASTEWATER AUTHORITY  
GILROY-MORGAN HILL MUNICIPAL WASTEWATER FACILITY,  
THE CITIES OF GILROY AND MORGAN HILL,  
AND INDIRECT DISCHARGERS OF  
SANTA CLARA COUNTY**

The California Regional Water Quality Control Board, Central Coast Region, (hereafter Board), finds that:

**FACILITY OWNER AND LOCATION**

1. The cities of Gilroy and Morgan Hill (hereafter referred to as the "Cities") each own and operate a wastewater collection and transport system located within each respective city. The wastewater collection and transport systems convey sewage to an interceptor sewer line owned and operated by the City of Gilroy. The South County Regional Wastewater Authority (hereafter referred to as "SCRWA"), comprised of the Cities, owns and operates a wastewater treatment, disposal, and water recycling facility (hereafter referred to as "Facility"). For purposes of this Order, SCRWA and the Cities are hereafter referred to collectively as the "Discharger."
2. The Discharger's treatment and disposal facilities are located adjacent to Llagas Creek on Southside Drive approximately two miles southeast of the City of Gilroy (Sections 9, 15, 16 & 17, T11S, R4E, MD B&M) as shown on Attachments "A" and "B" of this Order.
3. The Discharger is directly responsible for wastewater collection, transport, treatment, and disposal from each industrial user (Indirect Dischargers) connected to the system. It is incumbent upon the Cities (as building permit authorities) to protect the environment to the greatest degree possible and ensure their industrial systems are protected and utilized

properly. This responsibility includes preventing overflows and may include restricting or prohibiting the volume, type, or concentration of wastes added to the system.

**FACILITY DESCRIPTION**

**Discharge Type**

4. The Facility is designed to treat and dispose of domestic, commercial, and industrial wastewater from Gilroy and Morgan Hill.

**Design and Treatment Capacity**

5. The current Facility, brought on-line in 1995, was originally designed to treat an average dry weather flow (ADWF) of 7.5 million gallons per day (MGD) using an advanced secondary treatment process. Treatment consists of influent screening, aerated grit removal, nitrification, denitrification, and oxidation using an oxidation ditch; and secondary clarification. The plant was also designed to treat sustained month-long flows of 10.5 MGD, peak day flows of 18.8 MGD, and peak 4-hour flows of 22.5 MGD. Allowance for these flows resulted in a conservatively designed treatment plant.
6. Stress testing performed in 1999 demonstrated the Facility could treat up to 8.5 MGD while maintaining compliance with effluent limitations prescribed in Order No. 99-29. Average dry-weather flow during 1998-99 was

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approximately 6.03 MGD. Average wet-weather flow was 7.54 MGD.

7. Biosolids are wasted five days per week and dewatered using belt presses. Dewatered biosolids are trucked to the Marina Landfill in Monterey County. Biosolids production is approximately 55 wet tons per day, five days per week for a total annual sludge production of about 14,500 wet tons per year. The Regional Board and Monterey County Environmental Health Department approved use of biosolids as alternative daily cover at the Marina Landfill.

#### Disposal

8. Secondary effluent is currently discharged to 36 disposal (percolation) ponds over a 394-acre area around the Facility. The Discharger has documented that during higher than average rainfall seasons, groundwater rises beneath the land disposal ponds and reduces overall plant disposal capacity. Seasonal disposal pond percolation capacities are estimated to be 9.78 MGD (average dry weather capacity; April-October) and 8.98 MGD (average wet weather capacity; November-March). Current water reclamation flows effectively increase the overall average dry weather and wet weather disposal capacity flows to approximately 10.52 MGD and 9.17 MGD, respectively.
9. The percolation ponds must be disked or plowed annually to break up accumulated solids and keep the soils aerated. These maintenance activities must be conducted during the summer months as they require the ponds to be completely dry for effective use of the equipment. Approximately two to three months of dry conditions are required for each pond to properly conduct this activity.
10. The Discharger has been submitting an annual "Operations Plan and Hydrologic Balance" since 1984. The Operations Plan outlines a pond maintenance and use schedule that ensures the Discharger will maximize disposal system effectiveness and comply with waste discharge requirements. A procedure for collecting data and verifying percolation ability is included as part of the Operations Plan.

11. Wastewater percolation disposal capacity calculations indicate the facility currently has sufficient capacity to handle average dry weather flows of up to approximately 8.98 MGD during a 100-year frequency maximum rainfall year.

#### Water Reclamation

12. The Discharger implements a water-recycling program regulated under Master Water Reclamation Requirements Order No. 98-052. The Facility is permitted for a total water reclamation flow of 15 MGD.
13. The Discharger can currently divert up to 3 MGD of secondary effluent to a tertiary treatment process that meets the water reclamation criteria of the State Department of Health Services (Title 22, Division 4, Chapter 3, Sections 60301-60355 of the California Code of Regulations). The tertiary treatment process consists of coagulation, filtration, chlorination, and dechlorination. A portion of the tertiary treated wastewater is used at the Facility for landscape irrigation and for fire protection system supply. The majority is delivered offsite for landscape irrigation, agricultural irrigation and industrial purposes.
14. The Facility delivered approximately 185 million gallons of reclaimed water to off-site customers during 2003 (3.4% increase from 2002). Although historical average reclaimed water flows from the facility are only 1 MGD, the discharger has joined with the Santa Clara Valley Water District (District) in a recycled water program and expansion of the reclamation facility. A capacity of 9 MGD (with one filter out of service) is expected by 2006. The District owns and operates an eight-mile, twelve-inch recycled water distribution pipeline capable of supplying 3.0 MGD to local users.
15. A booster pump station and 1.5 million gallon storage reservoir were added to the reclamation system in 2002, improving the manageability of the recycled water system and customer access to the water. An additional 3.0-MGD recycled water reservoir

and pump station are in the design stage and are scheduled for completion prior to the 2006 irrigation season.

16. Demand for the Discharger's recycled wastewater is anticipated to increase each year and reduce wastewater flow rates to the land disposal areas during the summer months. This will aid summer disposal pond reconditioning activities and provide additional storage capacity prior to the wet season.

#### Facility Operations

17. The Facility is currently managed and operated by Operations Management International, Inc. (OMI) under contract with the Discharger.
18. The Cities currently implement individual informal Spill Prevention Programs to inspect and maintain the collection system and respond to spills within their respect jurisdictions. These programs are intended to reduce and mitigate sewer system overflows and spills.

#### Water Supply

19. The cities of Gilroy and Morgan Hill each have their own municipal groundwater supply. Water supply for both cities is of relatively good quality. Water supply data is provided as a flow weighted average (% contribution to the Facility) from both cities in the following table:

**Table 1 – Water Supply Quality Data for Gilroy and Morgan Hill<sup>a</sup>**

| Parameter (mg/L)      | September 2003 | March 2004 |
|-----------------------|----------------|------------|
| Total Dissolved Solid | 351.7          | 341.9      |
| Sodium                | 33.6           | 22.0       |
| Calcium               | 38.4           | 41.3       |
| Magnesium             | 25.5           | 27.6       |
| Chloride              | 47.0           | 33.7       |
| Sulfate               | 38.2           | 38.4       |
| Nitrate (as N)        | 4.5            | 5.7        |
| pH                    | 6.8            | 7.4        |

Notes:

- a) Flow weighted average of parameter concentrations using relative potable water use rates from each city.

## TREATMENT PERFORMANCE

#### Data Summary

20. Secondary and tertiary wastewater treatment performance data from 2000 through 2003 are summarized in Table 2 of this Order. The data show a very consistent and high level of treatment performance, resulting in five day biochemical oxygen demand (BOD<sub>5</sub>), total suspended solids, and nitrate levels significantly below secondary effluent limits for land disposal and tertiary effluent limits for a Pajaro River discharge. Ammonia data presented in Table 2 are for total ammonia as nitrogen and not unionized ammonia. Unionized ammonia is a function of temperature and pH. The maximum effluent ammonia concentration of 0.1 mg/L presented in Table 2 corresponds to an unionized ammonia concentration of less than 0.003 mg/L assuming a pH of 7.8 and a temperature of 20° C. This data indicate the Facility will be able to meet the unionized ammonia effluent limitation of 0.025 mg/L.

21. Effluent (both secondary and tertiary) TDS, sodium and chloride concentrations are moderately high as a result of water supply quality and the use of water softeners within the community. In addition, standard wastewater treatment processes do not effectively remove salts and drinking water treatment methods such as reverse osmosis are not economically or environmentally justifiable for wastewater treatment at this facility. Although these parameters meet the Basin Plan surface water quality objectives for the Pajaro River at Chittenden, they exceed the median groundwater objectives for the Llagas sub-area of the Pajaro River sub-basin (see Basin Plan section of this Order). This is also the case for sulfate and boron. Effluent TDS concentrations are approximate to those observed in the Pajaro River, whereas effluent sulfate levels are approximately half of Pajaro River values and sodium and chloride effluent concentrations are generally higher than those of the Pajaro depending on seasonal variations.

Table 2 - Summary of Secondary and Tertiary<sup>b</sup> Effluent Data<sup>a</sup> for SCRWA Facility

| Parameter              |                     | Units      | 2000             | 2001             | 2002             | 2003             |
|------------------------|---------------------|------------|------------------|------------------|------------------|------------------|
| Flow                   | Daily Avg           | mgd        | 6.499<br>(0.644) | 6.245<br>(0.551) | 6.453<br>(0.439) | 6.034<br>(0.504) |
|                        | Daily Min           | mgd        | 5.936<br>(0.193) | 5.894<br>(0.01)  | 5.751<br>(0.101) | 5.756<br>(0.147) |
|                        | Daily Max           | mgd        | 7.517<br>(1.157) | 7.097<br>(1.131) | 7.001<br>(0.859) | 6.602<br>(1.053) |
| BOD <sub>5</sub>       | Annual Avg          | mg/L       | 3 (2)            | 3 (2)            | 4 (2)            | 3 (2)            |
|                        | Annual Max          | mg/L       | 4 (2)            | 4 (2)            | 6 (2)            | 5 (3)            |
|                        | Avg Monthly Removal | %          | 98.8             | 98.8             | 98.5             | 99.1             |
|                        | Low Monthly Removal | %          | 98.4             | 98.5             | 97.7             | 98.6             |
| Total Suspended Solids | Annual Avg          | mg/L       | 3 (0.61)         | 4 (1.35)         | 4 (2.2)          | 4 (1.5)          |
|                        | Annual Max          | mg/L       | 4 (1.13)         | 5 (2.6)          | 7 (2.2)          | 5 (2.2)          |
|                        | Avg Monthly Removal | %          | 98.9             | 98.7             | 98.8             | 98.9             |
|                        | Low Monthly Removal | %          | 98.5             | 98.4             | 97.8             | 98.6             |
| Settleable Solids      | Annual Max          | ml/L       | <0.05            | <0.06            | <0.07            | < 0.05           |
| Nitrate (as N)         | Annual Avg          | mg/L       | 1.8 (2.3)        | 2.1 (2.6)        | 2.4 (2.6)        | 2.3 (2.3)        |
|                        | Annual Max          | mg/L       | 2.7 (4.2)        | 2.5 (4.5)        | 4.9 (4.2)        | 3.6 (4.0)        |
| Total Ammonia (as N)   | Annual Avg          | mg/L       | 0.06             | 0.07             | 0.07             | 0.06             |
|                        | Annual Max          | mg/L       | 0.07             | 0.09             | 0.10             | 0.1              |
| TDS                    | Annual Avg          | mg/L       | 640              | 639              | 629              | 627              |
|                        | Annual Max          | mg/L       | 659              | 669              | 643              | 657              |
| Sodium                 | Annual Avg          | mg/L       | 114              | 111              | 116              | 110              |
|                        | Annual Max          | mg/L       | 140              | 140              | 130              | 120              |
| Chloride               | Annual Avg          | mg/L       | 157              | 154              | 155              | 153              |
|                        | Annual Max          | mg/L       | 167              | 172              | 167              | 168              |
| Sulfate                | Annual Avg          | mg/L       | 62               | 62               | 64               | 62               |
|                        | Annual Max          | mg/L       | 70               | 72               | 68               | 69               |
| Boron                  | Annual Avg          | mg/L       | 0.42             | 0.65             | 0.69             | 0.64             |
|                        | Annual Max          | mg/L       | 0.63             | 0.74             | 0.82             | 0.90             |
| pH                     | Annual Avg          | --         | 7.7 (7.6)        | 7.7 (7.6)        | 7.7 (7.6)        | 7.7 (7.6)        |
|                        | Annual Min          | --         | 7.5 (7.5)        | 7.5 (7.5)        | 7.6 (7.5)        | 7.6 (7.4)        |
|                        | Annual Max          | --         | 7.8 (7.7)        | 7.8 (7.6)        | 7.7 (7.7)        | 7.7 (7.6)        |
| Turbidity              | Annual Avg          | NTU        | (0.37)           | (0.37)           | (0.57)           | (0.43)           |
|                        | Annual Max          | NTU        | (0.58)           | (0.56)           | (1.45)           | (0.61)           |
| Dissolved Oxygen       | Annual Avg          | mg/L       | (4.2)            | (2.6)            | (3.9)            | (5.1)            |
|                        | Annual Min          | mg/L       | (3.4)            | (3.5)            | (3.3)            | (4.4)            |
| Total Coliform         | Annual Min          | mpn/100 ml | (<2)             | (<2)             | (<2)             | (< 2)            |
|                        | Annual Max          | mpn/100 ml | (3)              | (<2)             | (<2)             | (4)              |

## Notes:

- Data are summarized from average monthly effluent water quality data submitted with the Discharger's annual self-monitoring reports.
- Numbers in parentheses represent tertiary effluent data unless noted otherwise.

22. Tertiary treated effluent from the Facility is generally of better quality than water in the Pajaro River with respect to a number of water quality parameters. These parameters include but are not limited to: BOD<sub>5</sub>, nitrate, ammonia, sulfate, turbidity, total suspended solids and fecal coliform bacteria.
23. Rainfall dependent inflow and infiltration (I/I) has been fairly limited since the 1997/1998 wet season and appears to be primarily attributable to a fairly well maintained collection system and the absence of an extreme wet season since that time. The City of Gilroy conducted an I/I evaluation in 2003 for the Gilroy portion of the collection system. Evaluation of Facility flows for the 2001-2002 and 2002-2003 wet seasons indicated I/I flow contributions of up to 0.2 MGD from the Gilroy sewer system. The May 2003 evaluation indicated the cost of I/I related sewer repair would exceed the benefit realized by reduced pumping costs for normal wet season flows. The I/I flow contribution from Morgan Hill is uncertain and more detailed review of Facility flow data during extreme wet seasons is not available. Based on historical flow and storm data, existing Facility treatment and hydraulic capacities can handle increased flows due to I/I at current domestic flows. However, discharge modeling conducted as part of the Discharger's Effluent Management Plan indicates future flows (including I/I flow projections approximated by the 1997-1998 severe wet season) may exceed land disposal capacity during extreme wet seasons (100-year return frequency wet season).

## SITE DESCRIPTION

### Geology

24. The Facility is located on fairly level (<2% slope) topography consisting of Sunnyvale silty clay, Campbell silty clay and silty clay loam, and Pacheco clay loam. These soils are generally characterized by poor drainage, slow permeability (moderate for Pacheco clay loam) and low runoff velocity.

### Groundwater

25. The shallow, upper, semi-perched groundwater zone beneath the Facility is

approximately 100-feet deep and is characterized by clay and sandy clay soils ranging from 5 to 15-feet thick interbedded with or overlying one or more gravel water-bearing zones. Deeper confined and unconfined groundwater zones exist below about 150 feet. Shallow groundwater beneath the Facility is typically encountered 5 -25 feet below ground surface depending on location and season.

26. The shallow groundwater zone is recharged from Llagas Creek, rainfall, agricultural return water, upward leakage of the confined aquifer and percolation of secondary wastewater. Shallow groundwater levels vary seasonally with rainfall and groundwater pumping, typically following summer pumping/winter recharge seasons of the nearby farmlands. Subsequently, groundwater elevations are higher during the recharge season from November to March and lower during the agricultural pumping season from April to October. Regional shallow groundwater gradients are to the east/southeast.
27. Shallow groundwater in the vicinity of the Facility is, and has historically been, of poor quality particularly with respect salts and nutrients. Quarterly shallow groundwater monitoring data from Facility monitoring wells are outlined for selected parameters in the following table.

**Table 3 – Facility Area Groundwater Quality Data<sup>a</sup>**

| Parameters (mg/L)      | W1   | W2   | W3   |
|------------------------|------|------|------|
| Total Dissolved Solids | 196  | 1552 | 753  |
| Sodium                 | 11   | 160  | 85   |
| Chloride               | 19   | 309  | 133  |
| Nitrate                | 0.01 | 29   | 4    |
| Ammonia (as N)         | 0.01 | 5.3  | 0.39 |

**Notes:**

- a) Calculated from quarterly groundwater monitoring data (January 2003 to March 2004) from selected monitoring wells as shown on Attachment C of this Order.
28. TDS, sodium and chloride concentrations measured in Facility groundwater monitoring wells typically exceed median groundwater objectives for the Llagas sub-area of the Pajaro River sub-basin as specified in the Basin Plan

(see Basin Plan section of this Order). The relative impact of secondary effluent land disposal is uncertain given the lack of historical data and the widespread historical agricultural activities in the vicinity of the Facility.

29. The main water-producing zone is 300 feet below ground surface and is used extensively for municipal water supply. Groundwater samples taken from the municipal wells of the City of Gilroy, which draw from this zone, exhibit average mineral concentrations listed in the following table:

**Table 4 – City of Gilroy Municipal Groundwater Supply Water Quality<sup>a</sup>**

| Parameter              | Concentration (mg/l) |
|------------------------|----------------------|
| Total Dissolved Solids | 326.6                |
| Sodium                 | 20                   |
| Calcium                | 46.2                 |
| Magnesium              | 22.4                 |
| Chloride               | 22.6                 |
| Nitrate (as N)         | 6.8                  |
| Sulfate                | 36.6                 |

Notes:

- a) March 2004 municipal well sampling data

30. The closest domestic wells and the closest agricultural supply wells not owned by the Discharger are approximately 1000 feet from any of the disposal ponds at the Facility.

#### Surface Water

31. Llagas Creek, a surface water tributary to the Pajaro River, is located east of the Facility and flows in a southerly direction. Facility disposal ponds border Llagas Creek on the east and west; however, it is separated from the disposal areas by levees designed to withstand a 100-year flood. Miller Slough and an agriculture drainage discharge to Llagas Creek adjacent to the Facility. An additional agricultural drainage ditch discharges to Llagas Creek just south of the Facility.
32. Llagas Creek is, and has historically been, of poor water quality particularly with regard to salts and nutrients. Surface water quality data for selected parameters is outlined in the following table.

**Table 5 – Llagas Creek Surface Water Quality Data<sup>a</sup>**

| Parameter (mg/L)       | Min  | Max  | Avg  |
|------------------------|------|------|------|
| Total Dissolved Solids | 334  | 1020 | 684  |
| Sodium                 | 17   | 110  | 67   |
| Chloride               | 19   | 163  | 87   |
| Nitrate                | 0.21 | 34   | 12   |
| Ammonia (as N)         | 0.03 | 0.38 | 0.11 |
| Fecal Coliform         | 20   | 1600 | 315  |

Notes:

- a) Calculated from quarterly surface water monitoring data (January 2003 to March 2004) from surface sampling stations SW1 through SW9 as noted on Attachment C of this Order.

33. Total dissolved solids (TDS), sodium and chloride concentrations generally increase within Llagas Creek as surface water passes the Facility. Surface water concentrations for these parameters regularly exceed Water Quality Control Plan, Central Coast Basin Plan (Basin Plan, page III-13, Table 3-7) as noted in subsequent findings of this Order.
34. The potential or relative impact of secondary effluent disposal to land on Llagas Creek is uncertain given complex hydrogeology and a number of relatively uncharacterized non-wastewater discharges along the reach of Llagas Creek adjacent to the Facility. There are multiple non-wastewater discharges to Llagas Creek along the length of the Facility property. These include, but are not limited to, storm water runoff from areas outside of the treatment plant property, runoff from agricultural land, discharges from agricultural tile drains, and Miller Slough.
35. Nitrate, ammonia and fecal coliform concentrations are generally high at Llagas Creek surface water monitoring stations upstream of the Facility with no observable trends in increased concentration as surface water flows past the Facility. Surface water concentrations for these parameters regularly exceed Basin Plan surface water quality objectives. The potential or relative impact of secondary effluent disposal to land is uncertain and upstream impacts are likely attributable to agricultural and storm water runoff and wildlife impacts.

36. Inspection of the existing surface water monitoring locations indicates potential impacts to Llagas Creek from non-wastewater disposal activities are not adequately characterized. For example, Miller Slough, which drains a significant area including agricultural and municipal storm drainage, discharges to Llagas Creek downstream of existing sampling station SW-5, which is intended to be an upstream monitoring location. In addition, a City of Gilroy storm drain from a nearby industrial park discharges to Llagas Creek downstream of SW-5. Impacts from these discharges may be inappropriately attributed to wastewater disposal activities if detected at sampling station SW-7, which is intended as a downstream monitoring location.

37. The Pajaro River is located approximately 3 miles south/southwest of the Facility. The Pajaro River is of relatively moderate to poor water quality with respect to salts and nutrients. Receiving water sampling was conducted for a reasonable potential analysis per the State Implementation Policy as discussed in subsequent findings of this Order. Pajaro River sampling data results for selected parameters are outlined in the following table and generally represent constituents for which applicable water quality criteria were exceeded unless otherwise noted.

**Table 6 – Pajaro River Receiving Water Quality Data<sup>a</sup>**

| Parameter (mg/L)       | MDR<br>2002 | MDR<br>2002 | MDR<br>2003 |
|------------------------|-------------|-------------|-------------|
| Total Dissolved Solids | 500         | 790         | 540         |
| Sodium                 | 49.5        | 121         | 56          |
| Chloride               | 57          | 95          | 75          |
| Boron                  | 0.27        | 0.58        | 0.26        |
| Sulfate                | 130         | 180         | 140         |
| Nitrate (as N)         | 25          | 15          | 5.9         |
| Ammonia (total as N)   | 0.098       | 0.17        | 0.2         |
| Aluminum               | 440         | 1900        | 640         |
| Manganese              | 0.088       | 0.3         | 0.18        |
| Fluoride               | <0.024      | 0.88        | <0.06       |
| BOD <sub>5</sub>       | 1.5         | 7.6         | 18          |
| Fecal Coliform         | 80          | 170         | 20          |

Table Notes:

- a) Receiving water samples were collected from the Pajaro River just upstream of its confluence with the San Benito River.

- b) Parameter concentrations noted in italics did not exceed any water quality criteria

## PURPOSE OF ORDER

38. Agents for SCRWA filed a Report of Waste Discharge on April 14, 1997, and supplemental information on July 30, 1997, for authorization to discharge wastes under the National Pollutant Discharge Elimination System (NPDES). This information, along with two additional reports submitted by the Discharger on May 6, 2004, supports a request to dispose of up to 9.0 MGD of tertiary-treated municipal wastewater to the Pajaro River during wet weather months of November through April to facilitate the proper maintenance and safe operation of the existing percolation ponds.
39. Historical observations by Facility staff during wet years indicate high groundwater levels reduce or even eliminate percolation from various ponds during the entire winter season (November through March). Subsequently, wetter than normal conditions typically reduce excess percolation pond storage and reduce drying times for summer pond reconditioning activities.
40. Existing land disposal operational and safety constraints in conjunction with projected increases in wastewater flows as a result of community development require additional disposal alternatives to supplement the existing land disposal capacity at the Facility. The Discharger intends to reduce land discharges as a result of increased water reclamation during the spring and summer. This will effectively increase effluent storage within the disposal ponds prior to the wet season. However, the need for a controlled discharge of tertiary-treated effluent to the Pajaro River is anticipated during extreme wet seasons as early as 2007 to facilitate the proper maintenance and safe operation of the existing percolation ponds.
41. Although future plans include upgrading the tertiary treatment capacity to 15 MGD, as authorized by Order No. 98-052, this permit limits the Pajaro River discharge to 9 MGD.
42. The Discharger prepared an Effluent Management Plan (*Effluent Management Plan*



- *South County Regional Wastewater Authority, May 2004 Final Report*, prepared by Montgomery Watson Harza) to evaluate potential flow, temperature, chemical barrier (to fish migration), and erosion and siltation impacts as a result of a wet season (November through April) discharge of tertiary effluent to the Pajaro River. The EMP established Pajaro River low-flow and high-flow discharge triggers to mitigate potential downstream impacts. The proposed discharge flow triggers are employed as discharge specifications of this Order.

43. The Discharger prepared a Biological Resources Evaluation (*Biological Resources Evaluation - South County Regional Wastewater Authority, May 2004 Final Report*, prepared by Montgomery Watson Harza) to evaluate potential biological impacts as a result of a wet season discharge to the Pajaro River. The BRE evaluated flow, temperature and water quality impacts to sensitive status species that may be present within the Pajaro River corridor utilizing average wet season Pajaro River flows, low and high-flow Pajaro River discharge triggers established in the EMP, maximum allowable discharge flow of 9 MGD, and available water quality data.
44. The 9.0 MGD surface water discharge will occur through an outfall identified as Discharge No. 001. Discharge No. 001 is located in the Pajaro River at the Highway 25 crossing at 36°56'52" N. Latitude, 121°30'43" W. Longitude. The discharge point is depicted in Attachment "B."
45. The Discharger intends to install an ultraviolet (UV) disinfection system for the Pajaro River tertiary effluent discharge to eliminate potential disinfection byproduct and chlorine residual impacts to the receiving water.
46. This Order also continues to regulate the existing land disposal of secondary treated municipal wastewater.

#### MONITORING & REPORTING PROGRAM

47. The Monitoring and Reporting Program requires operational monitoring, influent and

effluent monitoring, disposal pond monitoring, groundwater monitoring, Llagas Creek monitoring, and Pajaro River monitoring. Reporting is required on a monthly basis.

#### BASIN PLAN

48. The Board adopted the Water Quality Control Plan, Central Coast Basin (Basin Plan) on September 8, 1994. The Basin Plan incorporates statewide plans and policies by reference and contains water quality objectives and strategies for protecting beneficial uses of State waters.
49. The Water Quality Control Plan for the Central Coast Region (Basin Plan) designates the existing and anticipated beneficial uses of groundwater in the vicinity of the land discharge to include:
  - a) Domestic water supply;
  - b) Agricultural water supply
  - c) Industrial process supply; and,
  - d) Industrial service supply.
50. The Basin Plan specifies water quality objectives for certain groundwater basins, which are intended to serve as a baseline for evaluating water quality management in the basin. The objectives are, at best, representative of gross areas only, and are as follows for the Llagas sub-area of the Pajaro groundwater basin:

**Table 7- Median Groundwater Objectives for the Llagas Groundwater Sub-area**

| Parameter    | Concentration (mg/L) |
|--------------|----------------------|
| TDS          | 300                  |
| Cl           | 20                   |
| Sulfate      | 50                   |
| Boron        | 0.2                  |
| Sodium       | 20                   |
| Nitrate as N | 5                    |

Excerpted from Table 3-8, page III-16 of the Basin Plan

51. The Basin Plan designates existing and anticipated beneficial uses of the Pajaro River that could be affected by the discharge to include:
  - e) Municipal and Domestic Supply;
  - f) Agricultural Water Supply;

- g) Industrial Service Supply;
  - h) Groundwater Recharge;
  - i) Water Contact Recreation;
  - j) Non-Contact Water Recreation;
  - k) Wildlife Habitat;
  - l) Cold Freshwater Habitat;
  - m) Warm Freshwater Habitat;
  - n) Migration of Aquatic Organisms;
  - o) Spawning, Reproduction, and/or Early Development;
  - p) Freshwater Replenishment;
  - q) Commercial and Sport Fishing.
52. In addition to the designated beneficial uses in the Basin Plan, the Pajaro River also has an existing beneficial use of threatened species habitat. The river provides habitat for Oncorhynchus mykiss, or steelhead trout, which was recently designated to be a threatened species. Basin Plan Chapter III, section II.A.2.a, General Objectives, specifies for temperature: "Natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such alteration in temperature does not adversely affect beneficial uses."
53. For receiving waters with designated beneficial uses of municipal and domestic water supply, the Basin Plan establishes the primary drinking water maximum contaminant levels (MCLs), listed at Title 22 of the California Code of Regulations, Sections 64431 (inorganic compounds) and 64444 (organic compounds); as applicable water quality objectives.
54. The Basin Plan contains narrative and numeric water quality objectives, which are also applicable to the Discharger. The Basin Plan's narrative water quality objective for toxicity states, in part:

"All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods as

specified by the Regional Board. In addition, effluent limits based upon acute bioassays of effluents will be prescribed where appropriate, additional numeric receiving water objectives for specific toxicants will be established as sufficient data become available, and source control of toxic substances is encouraged."

55. The Basin Plan specifies water quality objectives for certain surface waters, which are intended to serve as a baseline for evaluating water quality management in the basin. The objectives are, at best, representative of gross areas only, and are based on preservation of existing quality or water quality enhancement believed attainable following control of point sources. Water quality objectives are as follows for the Llagas Creek, San Benito River, and Chittenden sub-areas of the Pajaro River sub-basin.

**Table 8 – Surface Water Quality Objectives for the Pajaro River Sub-basin**

| Parameter<br>(mg/L) | Sub-area        |                        |            |
|---------------------|-----------------|------------------------|------------|
|                     | Llagas<br>Creek | San<br>Benito<br>River | Chittenden |
| TDS                 | 200             | 1,400                  | 1,000      |
| Chloride            | 10              | 200                    | 250        |
| Sulfate             | 20              | 350                    | 250        |
| Boron               | 0.2             | 1.0                    | 1.0        |
| Sodium              | 20              | 250                    | 200        |

Excerpted from Table 3-7, page III-13 of the Basin Plan

#### **EVALUATION OF EFFLUENT LIMITATIONS FOR SALTS**

56. Water Code section 13263 mandates that waste discharge requirements implement the Water Quality Control Plan, Central Coast Basin (Basin Plan). Water quality objectives in the Basin Plan must be protected by waste discharge requirements. Also, the anti-degradation policy (adopted by the State Board in SWRCB Resolution 68-16) requires that degradation of water quality be permitted only if it is consistent with the maximum benefit of the people of the state, will not unreasonably affect present and anticipated beneficial use of such water, and will not result in water quality less than that prescribed in water quality policies, including plans. While the anti-

degradation policy conditionally allows some degradation of water quality, it requires that at a minimum, beneficial uses must be protected and water quality objectives in water quality control plans and policies must be implemented.

57. The Basin Plan contains flexible water quality objectives for TDS, sodium, chloride, sulfate, and boron in specified surface water bodies and groundwater sub-basins. The groundwater objective for these constituents applicable to the Llagas Creek sub-area of the Pajaro River sub-basin and surface water objectives applicable to Llagas Creek are listed in the previous "Basin Plan" section of these findings.
58. The Regional Board sets effluent limitations for salts to protect surface water and groundwater based on several factors in the Basin Plan. It must consider Tables 3-7 (page III-13) and 3-8 (page III-16) which list numeric water quality "objectives" for specific sub-basins and sub-areas. The Basin Plan states these "objectives" are "to serve as a water quality baseline for evaluating water quality management." The Basin Plan continues, "the values are at best representative of gross areas only." Thus, concentration limitations are not true water quality objectives that must be imposed in every portion of the sub-basin but instead are a starting point for water quality management. The Basin Plan explains that on a case-by-case basis the Regional Board must consider other water quality objectives in the Basin Plan, existing and probable beneficial uses and actual groundwater quality naturally present (Basin Plan pages III-12 and III-15).
59. It should be noted that inconsistencies exist within the Water Quality Objectives for Specific Inland Surface Waters, Enclosed Bays and Estuaries (Section II.A.3 and Table 3-7) section of the Basin Plan, whereby median values are cited in the text and annual mean values are cited as a Table 3-7 footnote. The footnote for Table 3-7 states, "*Objectives are based on preservation of existing quality or water quality enhancements believed attainable following control of point sources.*" At this time it is uncertain what data was used to develop the water quality objectives contained in the 1994 Basin Plan and what the term "existing quality" refers to.

#### Land Discharge

60. Impacts to the groundwater basin from salts were identified as a potential significant, unavoidable impact in the 1990 Environmental Impact Report for the Facility. Significant progress has been made to date in reducing influent salt loading to the Facility and thus to the groundwater basin. However, salt loading to the basin due to the land disposal of secondary effluent remains an ongoing issue with long-term potential impacts.
61. Review of Facility monitoring well data indicates salt concentrations in groundwater generally exceed median groundwater objectives for the Llagas sub-area of the Pajaro River sub-basin. However, it is impossible to ascertain natural background groundwater quality near the Facility for salt constituents because the area has been impacted by years of agricultural and waste disposal uses, which probably increased natural salt levels. However, other factors such as beneficial uses and other Basin Plan objectives can be considered. Beneficial uses of groundwater in the disposal area are domestic and municipal supply (MUN), agricultural supply (AGR), and industrial supply (IND). Numeric salt constituent water quality objectives for AGR are listed in Basin Plan Tables 3-3 and 3-4 on pages III-8 and III-9, respectively.
62. The Agricultural Commissioner's office for Santa Clara County indicates the typical crops grown historically in the vicinity of the Discharger's disposal area are row crops such as bell and chili peppers, corn, lettuce, broccoli, garlic, and onion. A significant change in the types of crops grown in this area is not anticipated. All crops exhibit varying degrees of tolerance to irrigation water salinity; however, literature reviews indicate the types of crops found near the disposal areas exhibit moderate to slight sensitivity to irrigation water salinity.
63. There are no numeric objectives for salts to protect MUN. However, there is a narrative water quality objective affecting salts and the MUN beneficial use on page III-14 of the Basin Plan that provides, "Groundwater shall not contain taste or odor producing substances in

concentration that adversely affect beneficial uses." Thus, salt levels in groundwater must not be high enough to cause adverse taste or odor.

64. The Department of Health Services has established concentrations of certain substances that will cause adverse taste and/or odor in drinking water. These concentrations are called Secondary Maximum Contaminant Levels (Secondary MCLs). Secondary MCLs are presented as recommended, upper, and short-term water supply limits based on consumer acceptance levels. "Recommended" concentrations are desirable for a higher degree of consumer acceptance. "Upper" concentrations are acceptable if it is neither reasonable nor feasible to provide more suitable waters for supply. "Short-term" concentrations are acceptable only for existing systems on a temporary basis pending construction of treatment facilities or development of acceptable new water sources. The applicable Secondary MCLs to this discharge are summarized as follows:

**Table 9 – Secondary Maximum Contaminant Levels**

| Parameter | Recommended (mg/l) | Upper (mg/l) | Short-Term (mg/l) |
|-----------|--------------------|--------------|-------------------|
| TDS       | 500                | 1,000        | 1,500             |
| Chloride  | 250                | 500          | 600               |
| Sulfate   | 250                | 500          | 600               |

65. There are no narrative or numeric water quality objectives for salt constituents protective of the IND beneficial use. Acceptable salinity levels for industrial use vary significantly. Excessive salinity in industrial supply waters may impair beneficial use through such factors as scaling and corrosion or elevated salt concentrations for food processing industries. Certain industries may require extremely low salinity levels only achievable through pretreatment prior to use, even in cases where supply water has low salinity in comparison to other standards. It is therefore essentially impossible to ensure groundwater quality suitable for all industrial uses, as naturally occurring minerals may contribute salinity levels in excess of what is acceptable for certain types of industry. Thus, Regional Board staff believes protection of

MUN and AGR beneficial uses will be reasonably protective of most industrial uses, and has set effluent limitations accordingly.

66. The following table compares median concentrations of TDS, sodium, chloride, sulfate, and boron in shallow groundwater beneath the disposal area with both anticipated effluent concentrations and corresponding effluent limitations in this Order:

**Table 10 – Comparison of Groundwater and Effluent Concentrations with Proposed Effluent Limitations**

| Parameter | Concentration (mg/l) |          |                     |
|-----------|----------------------|----------|---------------------|
|           | Shallow Groundwater  | Effluent | Effluent Limitation |
| TDS       | 795                  | 634      | 1,000               |
| Sodium    | 85                   | 115      | 200                 |
| Chloride  | 147                  | 155      | 250                 |
| Sulfate   | 120                  | 63       | 250                 |
| Boron     | 0.34                 | 0.6      | 1.0                 |

Notes:

- Based on average quarterly groundwater data for 21 facility monitoring wells during 1999
  - Based on monthly average concentrations for 2000 to 2003
67. Secondary effluent limitations for salts (inorganics) in this Order are based on evaluation of applicable Secondary MCLs, interpretation of Basin Plan Table 3-3 (Guidelines for Interpretation of Quality of Water for Irrigation), Basin Plan Table 3-4 (Water Quality Objectives for Agricultural Water Use), review of literature, groundwater and effluent data, and the ability to remove these constituents from the effluent. In cases where numerical objectives are presented as a range of values, such as in Basin Plan Table 3-3 and literature data, staff used best professional judgement based on crop data as discussed previously. In all cases, Regional Board staff believes the effluent limitations are protective of MUN and AGR beneficial uses. Specifically, the TDS limitation is set at the upper Secondary MCL concentration. The sodium limitation is based on review of literature values for protection of human health and aesthetics, as well as agricultural usage. The chloride and sulfate limitations are set at the Secondary MCLs. The boron

limitation is based on Basin Plan Tables 3-3 and 3-4 for AGR beneficial uses.

68. Basin Plan water quality objectives for specific surface waters are similar to those for the related groundwater basins, and are equally flexible. However, this Order does not contain effluent limitations to implement surface water objectives for land discharges adjacent to Llagas Creek. This is because there is not sufficient evidence to support a finding that effluent disposed to the ponds is impacting Llagas Creek. Regional Board staff performed a comprehensive review of the Discharger's surface water monitoring data. Evaluation of impacts from the percolation ponds on Llagas Creek is a complex issue. There are multiple discharges to Llagas Creek along the length of the treatment plant property. These include, but are not limited to, storm water runoff from areas outside of the treatment plant property, runoff from agricultural land, discharges from agricultural tile drains, and Miller Slough. Although the Facility is suspected to be a contributing source of impacts, monitoring data for Llagas Creek do not indicate a definite impact attributable to wastewater disposal activities.

#### **Pajaro River Discharge**

69. Beneficial uses of the Pajaro River as specified in the Basin Plan are outlined in Finding no. 52 of this Order. Arguably, the existing Rare, Threatened or Endangered Species (RARE) beneficial use designation should also be included in the Basin Plan since this is an existing use. See Finding 53.
70. The Basin Plan contains no narrative or numeric water quality objectives for salt constituents for any of the specified Pajaro River beneficial uses other than MUN and AGR. Review of available literature provided no definitive source of applicable water quality criteria for the remaining beneficial uses with regard to salts. Therefore, effluent limits were established considering the applicable surface water quality objectives within the Basin Plan, Department of Health Services Secondary MCL's, existing Pajaro River water quality, and the ability of the Discharger to remove salts from the effluent.

71. Applicable surface water quality objective are specified in the Water Quality Objectives for Specific Inland Surface Waters, Enclosed Bays and Estuaries section of the Basin Plan (Section II.A.3 and Table 3-7) for three sub-areas of the Pajaro River sub-basin including: at Chittenden, San Benito River, and Llagas Creek.
72. It is clear from the Discharger's surface water data that there are elevated levels of sodium, chloride, and total dissolved solids in Llagas Creek. These levels are consistently greater than those specified for the Llagas Creek sub-area of the Pajaro River sub-basin. Review of the administrative record indicates Llagas Creek sub-area surface water quality objectives were developed from a limited set of surface water sampling data collected near the headwaters of Llagas Creek at Llagas Road just downstream of Chesbro Reservoir. Based on current water quality conditions it does not appear that Basin Plan surface water quality objectives could ever have been maintained in this lower segment of Llagas Creek.
73. Review of Facility effluent data indicates the Discharger would not be able to meet the Llagas Creek sub-area surface water quality objectives without using drinking water treatment technologies such as reverse osmosis or membrane filtration. The inland Facility lacks a feasible means of brine disposal. Furthermore, water supply concentrations as outlined in earlier findings of this Order also do not meet the Llagas Creek sub-area surface water quality objectives.
74. It follows that using the Llagas Creek sub-area surface water quality objectives for a discharge into the Pajaro River, just downstream of the confluence with Llagas Creek, would not be appropriate or reasonably attainable by the Discharger.
75. The remaining surface water quality objectives as specified in the Basin Plan for the San Benito River and at Chittenden sub-areas of the Pajaro River are more representative of actual receiving water quality at the proposed discharge point and

downstream conditions of the Pajaro River. These values are also more in-line with Department of Health Services Secondary MCL's as previously stated in Table 9 of this Order.

76. Pajaro River effluent limits for salts were established using the Basin Plan surface water quality objectives for the at Chittenden sub-area of the Pajaro River sub-basin. These water quality objectives more closely approximate actual receiving water quality and are protective of the MUN and AGR beneficial uses. Comparison of the proposed effluent limits with average Pajaro River and effluent data is present in the following table:

**Table 11 – Comparison of Pajaro River and Effluent Concentrations with Proposed Effluent Limitations**

| Parameter | Concentration (mg/l) |          |                     |
|-----------|----------------------|----------|---------------------|
|           | Pajaro River         | Effluent | Effluent Limitation |
| TDS       | 610                  | 634      | 1,000               |
| Sodium    | 76                   | 115      | 200                 |
| Chloride  | 76                   | 155      | 250                 |
| Sulfate   | 150                  | 63       | 250                 |
| Boron     | 0.37                 | 0.6      | 1.0                 |

Notes:

- a) Based on average of three samples collected from the Pajaro River on March and July 2002, and February 2003.
  - b) Based on monthly average concentrations for 2000 to 2003
77. Regional Board staff believes the effluent limitations are protective of all beneficial uses, not just MUN and AGR. Specifically, the TDS limitation is at the upper Secondary MCL concentration, and the chloride and sulfate limitations coincide with the recommended secondary MCLs. The sodium limitation also coincides with literature values for protection of human health and aesthetics, as well as agricultural usage. As with the land discharge case the boron limitation is also in line with Basin Plan Tables 3-3 and 3-4 for AGR beneficial uses.
78. These effluent limits are currently attainable by the Discharger and restrict any substantial increase in effluent salts concentrations during future discharges. Effluent salt concentrations are generally similar to those detected in the Pajaro River and the effects of effluent

discharges containing salt concentrations in excess of background receiving water conditions are likely to be insignificant upon mixing with the receiving water. The relatively high level of dilution (20:1 at the low flow trigger level and 667:1 at the high flow trigger level), short discharge periods, and similarity of effluent and receiving water quality is not likely to cause significant decreases in receiving water quality or adversely effect downstream beneficial uses.

## EVALUATION OF TOXIC POLLUTANTS

79. The *National Toxics Rule* (NTR) (40 CFR § 131) was promulgated on December 22, 1992, and amended on May 4, 1995. On May 18, 2000, NTR criteria were supplemented by *California Toxics Rule* (CTR) criteria (40 CFR § 131.38). The NTR and CTR establish water quality criteria for toxic pollutants applicable to the Discharger.
80. The United States Environmental Protection Agency (U.S. EPA), at 40 CFR § 122.44(d)(1)(i), requires achievement of applicable water quality criteria and objectives for toxic pollutants through establishment of effluent limitations for all pollutants "which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality."
81. The Basin Plan contains narrative and numeric water quality objectives, which are also applicable to the Discharger. The Basin Plan's narrative water quality objective for toxicity states, in part:

"All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, toxicity bioassays of appropriate duration, or other appropriate methods as specified by the Regional Board. In addition, effluent limits based upon acute

bioassays of effluents will be prescribed where appropriate, additional numeric receiving water objectives for specific toxicants will be established as sufficient data become available, and source control of toxic substances is encouraged."

82. On March 2, 2000, the State Water Resources Control Board (State Board) adopted Resolution No. 2000-015, the *Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP was amended on April 26, 2000, and became effective on May 22, 2000. This policy was developed to establish a standard approach for permitting non-ocean surface water discharges of toxic pollutants subject to Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code) and the Clean Water Act. The SIP establishes: (1) implementation provisions for NTR and CTR water quality criteria, and Regional Boards' Basin Plan water quality objectives; (2) monitoring requirements for 2,3,7,8-TCDD equivalents; and (3) chronic toxicity control provisions.
83. In accordance with the methodology presented in Section 1.3 of the SIP (the Reasonable Potential Analysis or RPA), the most stringent applicable water quality objectives and criteria contained in the Basin Plan, the NTR, and the CTR have been compared to available effluent and background receiving water data to determine the need for effluent limitations for toxic pollutants. For toxic pollutants that show a "reasonable potential," effluent limitations have been established in accordance with Section 1.4 of the SIP.
84. The Discharger performed analysis of three effluent samples and three receiving water samples (collected in March 2002, July 2002, and February 2003) for priority pollutants and additional chemical compounds as required by the SIP. These toxic pollutant data were evaluated in accordance with the SIP to determine the need for effluent limitations.
85. Effluent sampling data identified several priority toxic pollutants exceeding applicable

SIP criteria resulting in a reasonable potential. These constituents include the three chlorine disinfection byproducts (trihalomethanes) chloroform, bromodichloromethane, and dibromochloromethane, and the plasticizer bis(2-ethylhexyl)phthalate.

86. In some cases receiving water samples exceeded applicable criteria also resulting in a reasonable potential thus requiring the establishment of effluent limitations. Constituents for which receiving water (Pajaro River) samples exceeded criteria include lead, thallium, aluminum and manganese. Aluminum and manganese are not priority toxic pollutants, however they were evaluated as part of the RPA analysis as Basin Plan pollutants.
87. If the Discharger requests the Regional Board consider mixing zones and dilution credits in developing effluent limitations, the Discharger must complete an independent mixing zone study in accordance with the SIP, Section 1.4.2. The Regional Board shall deny or significantly limit a mixing zone and dilution credit as necessary to protect beneficial uses, meet the conditions of the SIP, or comply with other regulatory requirements. The Regional Board may limit or deny dilution credits on a pollutant-by-pollutant basis, which may result in a dilution credit for all, some, or no priority pollutants in a discharge. If the Regional Board allows a mixing zone and dilution credit, the permit shall specify the methods by which the mixing zone was derived, the dilution credit granted, and the point(s) in the receiving water where the applicable criteria/objectives must be met.

#### ANTI-DEGRADATION

88. Any change in water quality authorized by these waste discharge requirements will not violate SWRCB Resolution 68-16 or (for discharges to surface water) the federal antidegradation policy (40 CFR sec. 131.12) (SWRCB Order No. WQ 86-17).
89. Resolution 68-16 provides if there is degradation of water quality it must not "unreasonably affect present and anticipated

beneficial use of such water and will not result in water quality less than that prescribed [by water quality control] policies." The related provision in the federal anti-degradation policy states, "Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." In short, the degradation may not violate water quality objectives or in the absence of objectives, must not unreasonably affect existing and designated beneficial uses. Also, if there is degradation the Board must determine that it has been demonstrated the change "will be consistent with the maximum benefit to the people of the State." The related provision in the federal policy states, "allowing lower water quality is necessary to accommodate important economic or social development."

90. The surface water discharge to the Pajaro River authorized by this Order will not cause appreciable degradation of receiving waters including Pajaro River, Monterey Bay and groundwater. This permit requires that all waste constituents be discharged at concentrations that do not exceed or are less than Basin Plan water quality objectives or background conditions in the Pajaro River. For some constituents (for example, nitrate, ammonia, sulfate, turbidity, total suspended solids and fecal coliform) the discharge will be cleaner than receiving water quality and will contribute to improved water quality.
91. The Regional Board finds that the surface water discharge will not degrade receiving water quality. Even if it did cause degradation the discharge would not cause or contribute to receiving water quality that is less than necessary to protect existing and potential beneficial uses. This permit requires that all effluent discharges comply with water quality objectives established in the Basin Plan. The permit also establishes site-specific effluent limitations to protect existing and designated beneficial uses for which there are no water quality objectives specified in the Basin Plan.
92. Any water quality degradation that may be authorized under this Order is necessary to accommodate important economic or social development and is consistent with the maximum benefit to the people of the State.
93. The Discharger has determined that additional wastewater treatment and disposal capacity are needed to accommodate waste from existing population and industrial/commercial users and to accommodate future growth in their communities. The Regional Board has no authority to control the growth of these communities. But, the Regional Board does have responsibility to protect against water pollution that may be caused by waste generated when these communities grow. The best way to prevent such water pollution is to ensure that adequate wastewater collection, treatment and disposal facilities are in place to manage the additional waste. The Discharger has analyzed various alternatives for managing existing and future waste loads. The project the Discharger proposed, Pajaro River discharge, which is authorized by this Order, is needed to accommodate these wastes while minimizing adverse impacts on receiving water quality.
94. The seasonal Pajaro River surface water discharge will potentially benefit the Llagas groundwater sub-basin and Llagas Creek by reducing its pollutant loading. Less secondary effluent will be percolated to the groundwater basin when tertiary treated effluent is discharged to the Pajaro River. In addition, the ability to discharge tertiary effluent to the Pajaro River during extreme wet seasons will reduce the likelihood of a spill or controlled release of secondary or tertiary effluent to Llagas Creek.
95. The Pajaro River surface water discharge will have no anticipated negative impact on Llagas Creek because it is occurring downstream of the confluence of Llagas Creek with the Pajaro River. Because it will reduce loading to the ponds in the winter months when ground water is shallow, it is likely to reduce any impacts the ponds may have had on Llagas Creek in the past. Thus the proposed discharge could improve Llagas Creek water quality.



**ENVIRONMENTAL REVIEW**

96. The City of Gilroy and the City of Morgan Hill each certified a final Environmental Impact Report (EIR) on September 24, 1990, in accordance with the California Environmental Quality Act (CEQA, Public Resources Code, section 21000, et seq. and the California Code of Regulations).
97. Waste discharge requirements for this discharge are exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21100, et seq.) in accordance with Section 13389 of the California Water Code.
98. The adoption of NPDES permits is exempt from the EIR preparation requirements of CEQA in accordance with California Water Code Section 13389. However, the Regional Board has considered the significant environmental impacts identified in the EIR that are within the jurisdiction of the Regional Board and that may result from the discharge to surface waters authorized by this NPDES permit. The impacts described in the Staff Report as Impacts A, B, and D through M have been mitigated to a less-than-significant level. Impact C (impacts from plant shutdown or failure, industrial pretreatment failure and chemical spills, or a major seismic event) has been mitigated to the extent possible, and in a manner consistent with other similar facilities. It is not possible or feasible to completely eliminate these risks, particularly those from seismic activity. All feasible mitigation measures have been incorporated into the project, and the EIR identified no alternatives that would mitigate this impact entirely. The remaining potential impacts are acceptable in light of the need for storage and treatment capacity.
99. The discharges to land that are covered by this permit were authorized under the existing waste discharge requirements, are existing projects, and are exempt from CEQA review under CEQA Guidelines section 15301.

**EXISTING ORDERS AND GENERAL FINDINGS**

100. The discharge has been regulated by Waste Discharge Requirements Order No. 99-29, adopted by the Regional Water Quality Control Board on May 21, 1999.
101. The Environmental Protection Agency and the Board classify this discharge as a major discharge.
102. Since the Discharger's flows exceed one MGD, storm water discharges from the SCRWA facility are regulated under the State Water Resources Control Board's General Industrial Activities Storm Water Permit, which requires development and implementation of a Storm Water Pollution Prevention Plan and Best Management Practices. There is no off-site flow of storm water as all on-site storm water flows are contained on-site and directed through the wastewater treatment facility.
103. In accordance with California Water Code Section 13263.6 (a), the Regional Board shall prescribe effluent limitations as part of the waste discharge requirements of a Publicly Owned Treatment Works (POTW) for all substances for which the most recent toxic chemical release data (reported to the state emergency response commission pursuant to Section 313 of the Emergency Planning and Community Right to Know Act of 1986 (42 U.S.C. Sec. 11023)) indicate as discharged into the POTW, for which the State Water Board or the regional board has established numeric water quality objectives, and has determined that the discharge is or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to, an excursion above any numeric water quality objective. Evaluation of wastewater constituents in the discharge determined that no need exists to include effluent limitations in accordance with California Water Code Section 13263.6 (a).
104. For receiving waters with the beneficial use designation of municipal and domestic water supply, the Basin Plan establishes the primary drinking water maximum contaminant levels

- (MCLs), listed at Title 22 of the California Code of Regulations, Sections 64431 (inorganic compounds) and 64444 (organic compounds), as applicable water quality objectives.
105. Section 13385 of the California Water Code requires the Regional Board to impose mandatory penalties for chronic and serious violations of NPDES requirements. Failure to comply with NPDES requirements and conditions may result in enforcement action by the Board.
106. Total maximum daily load (TMDL) allocations will be developed for impaired surface waters in the Pajaro River and Llagas Creek. The Pajaro River impairments are due to excessive nutrients, siltation, and fecal coliform. The Llagas Creek impairments are due to excessive nutrients, siltation, chloride, fecal coliform, sodium, total dissolved solids, low dissolved oxygen, and pH excursions. TMDL documents will allocate responsibility for constituent loading throughout the Pajaro River and Llagas Creek watersheds. Draft TMDL documents are anticipated to be publicly available by December 2004 for nutrients and siltation. During development of the TMDL source assessment and implementation plan, if Regional Board staff find constituent contributions from waste discharged may adversely impact beneficial uses or exceed water quality objectives, TMDL documents may require changes to these waste discharge requirements. These waste discharge requirements may be modified to implement applicable TMDL provisions and recommendations.
107. A permit and the privilege to discharge waste into waters of the State are conditional upon the discharge complying with provisions of Division 7 of the California Water Code and of the CWA (as amended or as supplemented by implementing guidelines and regulations) and with any more stringent effluent limitations necessary to implement water quality control plans, to protect beneficial uses, and to prevent nuisance. This Order shall serve as an NPDES permit pursuant to Section 402 of the CWA.
108. Pursuant to Sections 13267 and 13383 of the California Water Code, this Order requires the Discharger to conduct monitoring and provide reports as specified in the Monitoring and Reporting Program R3-2004-0099, which accompanies this Order. Monitoring and reporting is necessary for the Board to determine compliance with this Order. The Discharger is also required under this Permit to provide effluent monitoring reports for priority pollutants to enable the Board to establish effluent limitations under the CTR, if necessary.
109. Any person affected by this action of the Board may petition the State Water Board to review the action in accordance with Section 13320 of the California Water Code and Title 23 of the California Code of Regulations, Section 2050. The State Water Board must receive the petition within 30 days of the date of this Order. Copies of the law and regulations applicable to filing petitions will be provided upon request.
110. On July 13, 2004, the Board notified the Discharger and interested agencies and persons of its intent to reissue WDRs for the discharge and has provided them with a copy of the proposed Order and an opportunity to submit written views and comments, and scheduled a public hearing.
111. In a public hearing on September 10, 2004, the Board heard and considered all comments pertaining to the discharge and found this Order consistent with the above findings.
112. A draft NPDES permit for the Facility that staff proposed for Regional Board consideration in May 1998 is the subject of pending litigation, *South County Regional Wastewater Authority v. Central Coast Regional Water Quality Control Board* (Santa Clara County Superior Court No. CV781267, California Court of Appeal, Sixth Appellate Dist. No. H026612). The issuance of this permit is intended to resolve the litigation in lieu of awaiting a decision by the Court of Appeal. In issuing this permit, the Regional Board has relied on the Discharger's representation that adoption of an acceptable permit will resolve all issues in the case to the

Discharger's satisfaction, including any claims for costs or attorneys fees that the Discharger may have. The Discharger's letter dated [to be inserted] states that all terms of the draft permit are acceptable for this purpose.

**IT IS HEREBY ORDERED** pursuant to authority in Sections 13263 and 13377 of the California Water Code that South County Regional Wastewater Authority, the City of Gilroy, the City of Morgan Hill, their agents, successors, and assigns, may collect, transport and discharge waste from their wastewater treatment facilities providing they comply with the following:

[Throughout these requirements footnotes are listed to indicate the source of requirements specified. Requirement footnotes are as follows:

|       |  |
|-------|--|
| BPJ   | Best Professional Judgment of Regional Water Quality Control Board Staff   |
| ROWD  | The Discharger's Report of Waste Discharge   |
| 40CFR | Title 40 Code of Federal Regulations   |
| BP    | Central Coast Regional Water Quality Control Plan  |
| T22   | Title 22 CCR, Division 4, Chapter 3, Water Reclamation Criteria  |
| PC    | Porter-Cologne Water Quality Control Act (California Water Code)   |
| SIP   | State Implementation Policy (Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California)] |
| EMP   | Effluent Management Plan, Montgomery Watson Harza, Final Report, May 2004  |

#### A. PROHIBITIONS

1. Wastewater flows into the wastewater facility shall not exceed the limits of "Table 12 – Influent Flow Limits." <sup>ROWD</sup>

**Table 12 – Influent Flow Limits**

| Flow Type (MGD)                       | Limit |
|---------------------------------------|-------|
| Average Dry Weather Flow <sup>a</sup> | 7.5   |
| Average Wet Weather Flow <sup>b</sup> | 9.0   |

Notes:

- a) Average daily flow in three driest months of each year.
  - b) Average daily flow in three wettest months of each year.
2. Discharge to any location other than the following is prohibited: <sup>ROWD</sup>

- a) Pajaro River surface discharge point No. 001 (tertiary treated effluent only),
  - b) designated domestic wastewater land disposal areas,
  - c) water recycling permitted by the Regional Water Quality Control Board, or
  - d) effluent storage or emergency overflow ponds.
3. Discharge of secondary treated wastewater to areas other than the designated domestic wastewater land disposal areas, or effluent storage/emergency overflow areas shown in Attachment "C" is prohibited. <sup>ROWD</sup>
  4. Bypass of the treatment facility and discharge of untreated or partially treated wastes is prohibited. <sup>PC</sup>
  5. Discharges of sludges, residues, or any other wastes into surface waters or into any area where it may be washed into surface water is prohibited. <sup>PC</sup>
  6. Discharge of any waste, except in compliance with this Order or other waste discharge requirements is prohibited.

#### B. DISCHARGE SPECIFICATIONS FOR SECONDARY EFFLUENT DISPOSAL

1. Freeboard shall exceed 2 feet in all designated wastewater land disposal areas. <sup>BPJ</sup>
2. Extraneous surface drainage shall be excluded from all designated wastewater land disposal areas. <sup>BPJ</sup>
3. Irrigation beds and designated wastewater land disposal areas shall be disked or plowed at least annually. <sup>BPJ</sup>
4. Wastewater shall be confined to land owned or controlled by the Discharger. <sup>BPJ</sup>
5. Wastewater shall be confined within bermed areas. <sup>BPJ</sup>
6. Wastewater application rates shall be consistent with accepted engineering practice. <sup>BPJ</sup>

7. Designated wastewater land disposal areas shall be dried to field moisture conditions between applications.<sup>BPJ</sup>
8. A pathway shall be maintained along the dike between the designated wastewater land disposal areas and Llagas Creek to allow inspections.<sup>BPJ</sup>
9. The Facility shall be managed so as to minimize mosquito-breeding habitat.<sup>BPJ</sup>

#### C. SECONDARY EFFLUENT LIMITS

1. Secondary treated wastewater discharged to the designated land disposal areas shall not exceed the federal technology-based limits for secondary treatment set forth in 40 CFR §133. Those limits are shown in "Table 13 - Secondary Effluent Limits."<sup>40CFR (133.102)/BPJ</sup>

**Table 13 - Secondary Effluent Limits**

| Parameter (mg/l)       | 30-Day Mean | 7-Day Mean |
|------------------------|-------------|------------|
| BOD <sub>5</sub>       | 30          | 45         |
| Total Suspended Solids | 30          | 45         |

2. Secondary treated wastewater discharged to the designated land disposal areas shall not exceed the following effluent limits for nitrate:<sup>BPJ</sup>

**Table 14 - Secondary Effluent Limits for Nitrate**

| Parameter (mg/l) | Daily-Max | 30-Day Mean |
|------------------|-----------|-------------|
| Nitrate as N     | 10        | 5           |

3. Secondary treated wastewater discharged to the designated land disposal areas shall not exceed the following limits for Basin Plan inorganics:<sup>BP/BPJ</sup>

**Table 15 - Secondary Effluent Limits for Inorganics**

| Parameter (mg/l)       | 12-month moving average |
|------------------------|-------------------------|
| Total Dissolved Solids | 1,000                   |
| Chloride               | 250                     |
| Sodium                 | 200                     |
| Sulfate                | 250                     |
| Boron                  | 1.0                     |

4. Secondary-treated wastewater discharged to the designated land disposal areas shall not have a pH less than 6.5 or greater than 8.3.<sup>BP</sup>

#### D. RECEIVING WATER LIMITS FOR THE LLAGAS GROUNDWATER SUBBASIN

1. Wastewater discharged to the designated land disposal areas shall not cause groundwater to contain taste- or odor-producing substances in concentrations that adversely affect beneficial uses.<sup>BP</sup>
2. Discharge shall not cause the median concentration of coliform organisms in groundwater over any seven-day period to be more than 2.2/100 ml.
3. The discharge shall not cause nitrate concentrations in the groundwater affected by disposal activities to exceed 10 mg/l (as N) or shall not cause a statistically significant increase of nitrate concentrations in underlying groundwaters, whichever is more stringent.
4. The discharge shall not cause radionuclides to be present in groundwater in concentrations that are deleterious to human, plant, animal, or aquatic life, or result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.<sup>BP</sup>
5. The discharge shall not cause a statistically significant increase of mineral or organic constituent concentrations in underlying groundwaters, as determined by statistical analysis of samples collected from wells in the vicinity of the disposal area.<sup>BP</sup>

#### E. DISCHARGE SPECIFICATIONS FOR TERTIARY EFFLUENT DISPOSAL

1. The flow rate of tertiary-treated wastewater discharged to the Pajaro River shall not exceed 9.0 MGD.<sup>ROWD/EMP</sup>
2. The discharge of tertiary-treated wastewater to the Pajaro River shall only occur during the months of November through April, on an as needed basis to facilitate the proper

maintenance and safe operation of the percolation ponds.<sup>ROWD/EMP</sup>

3. The discharge of tertiary-treated water to the Pajaro River shall only occur when Pajaro River flows are above 180 MGD, as measured at a gauging station established near the point of discharge and are below 6,004 MGD as measured at the Chittenden gauging station.<sup>EMP</sup>
4. If chlorine disinfection is utilized a CT value (chlorine concentration times modal contact time) of not less than 450 mg-min/l shall be maintained at all times with a modal contact time of at least 90 minutes based on 9.0 MGD.<sup>T22</sup>

#### F. TERTIARY EFFLUENT LIMITS

1. Tertiary treated wastewater discharged to the Pajaro River shall not exceed the following effluent limits:<sup>BPJ</sup>

**Table 16 - Tertiary Effluent Limits**

| Parameter (mg/L)         | Daily Max | 30-Day Mean | 7-Day Mean |
|--------------------------|-----------|-------------|------------|
| BOD <sub>5</sub>         | 20        | 10          | --         |
| Total Suspended Solids   | 20        | 10          | --         |
| Nitrate as N             | 10        | 5           | --         |
| Unionized Ammonia (as N) | 0.050     | 0.025       | --         |

2. Tertiary treated wastewater discharged to the Pajaro River shall not exceed the following surface water quality objectives for Basin Plan inorganics:<sup>BP/BPJ</sup>

**Table 17 - Tertiary Effluent Limits for Inorganics**

| Parameter (mg/L)       | 30-Day Mean |
|------------------------|-------------|
| Total Dissolved Solids | 1,000       |
| Chloride               | 250         |
| Sodium                 | 200         |
| Sulfate                | 250         |
| Boron                  | 1.0         |

3. Tertiary treated wastewater discharged to the Pajaro River shall not exceed the following water quality-based effluent limitations established in accordance with the SIP. These

limits apply to effluent discharged to Pajaro River at the end of pipe.<sup>SIP</sup>

**Table 18 - Tertiary Effluent Limitations for Basin Plan & Priority Toxic Pollutants**

| CAS#    | CER# | Constituent                 | AMEL (ug/L)       | MDEL (ug/L) |
|---------|------|-----------------------------|-------------------|-------------|
| 7439921 | 7    | Lead                        | 2.12              | 4.26        |
| 7440280 | 12   | Thallium                    | 1.7 <sup>c</sup>  | 3.42        |
| 67663   | 26   | Chloroform                  | 1.1               | 2.21        |
| 124481  | 23   | Dibromo-chloromethane       | 0.40              | 0.81        |
| 75274   | 27   | Bromo-dichloromethane       | 0.56              | 1.13        |
| 117817  | 68   | Bis(2-ethylhexyl) phthalate | 1.8 <sup>c</sup>  | 3.62        |
| 7429905 |      | Aluminum                    | 1000 <sup>c</sup> | 2010        |
| 7439965 |      | Manganese                   | 200               | 400         |

Notes:

- a) AMEL - Average Monthly Effluent Limitation
- b) MDEL - Maximum Daily Effluent Limitation
- c) Compare limitation to Title 22 MCLs and comply with most stringent value.

4. Turbidity shall not exceed the following limits:<sup>T22</sup>
  - a) Daily average turbidity must be less than or equal to 2 NTU,
  - b) turbidity must be less than 10 NTU at all times, and
  - c) turbidity must not exceed 5 NTU for more than five percent of the time.
5. Coliform concentrations shall not exceed the following limits:<sup>T22</sup>
  - a) the seven-day median concentration must be less than 2.2/100 ml,
  - b) coliform concentrations must be not exceed 23/100 ml in more than one sample taken over a 30-day range,
  - c) coliform concentrations must be less than 240 MPN/100 ml at all times.
6. The discharge shall not have a measurable chlorine residual.

## G. RECEIVING WATER LIMITS FOR THE PAJARO RIVER

1. The discharge shall not cause the Pajaro River to exceed the Basin Plan water quality objectives for the Chittenden sub-area of the Pajaro River sub-basin listed in *Table 8 - Water Quality Objectives for the Pajaro River sub-basin*.
2. To meet general Basin Plan water quality objectives, the discharge shall not cause any of the following in the Pajaro River: <sup>BP</sup>
  - a) coloration that causes nuisance or adversely affects beneficial uses. Coloration attributable to materials of waste origin shall not be greater than 15 units or 10 percent above natural background color, whichever is greater.
  - b) taste or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance, or that adversely affect beneficial uses.
  - c) floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.
  - d) suspended material in concentrations that cause nuisance or adversely affect beneficial uses.
  - e) settleable material in concentrations that result in deposition of material that causes nuisance or adversely affects beneficial uses.
  - f) oils, greases, waxes, or other similar materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses.
  - g) biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
  - h) an increase in the suspended sediment load. The suspended sediment discharge

rate shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

- i) substances in concentrations which are toxic to, or which produce detrimental physiological responses in human, plant, or animal (particularly fish or aquatic) life.
- j) concentrations of unionized ammonia (NH<sub>3</sub>) to exceed 0.025 mg/l (as N) in receiving waters.
- k) individual pesticide or combination of pesticides to reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

For waters where existing concentrations are presently not detectable or where beneficial uses would be impaired by concentrations in excess of detection levels, total identifiable chlorinated hydrocarbon pesticides shall not be present at concentrations detectable within the accuracy of analytical methods prescribed in Standard Methods for the Examination of Water and Wastewater, latest edition, or other equivalent methods approved by the Executive Officer.

- l) organic substances in concentrations greater than the following.

|                      |            |
|----------------------|------------|
| Methylene Blue       |            |
| Activated Substances | 0.2 mg/l   |
| Phenols              | 0.1 mg/l   |
| PCB's                | 0.3 µg/l   |
| Phthalate Esters     | 0.002 µg/l |

- m) radionuclides to be in concentrations that are deleterious to human, plant, animal, or aquatic life; or result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal, or aquatic life.
3. To protect the *agricultural supply* beneficial use of the Pajaro River, the discharge shall not cause concentrations of chemical constituents in amounts that adversely affect such beneficial use. No controllable water quality factor shall degrade the quality of any groundwater resource

or adversely affect long-term soil productivity. Interpretation of adverse effect shall be as derived from the University of California Agricultural Extension Service guidelines provided in Basin Plan Table 3-3.<sup>BP</sup>

4. To protect the *warm freshwater habitat* and the *municipal supply* beneficial uses the discharge shall not cause the Pajaro River to have a pH less than 7.0 or greater than 8.3.<sup>BP</sup>
5. To protect the *cold freshwater habitat*, *warm freshwater habitat*, and the *spawning, reproduction and/or early development* beneficial uses the discharge shall not cause the Pajaro River to have a dissolved oxygen concentration of less than 7.0 mg/l.<sup>BP</sup> If the background Pajaro River dissolved oxygen concentration is less than 7.0 mg/l, then the discharge shall not cause any further decrease in Pajaro River dissolved oxygen concentration.
6. To protect the *cold freshwater habitat* beneficial use the discharge to the Pajaro River shall not increase the temperature of the Pajaro River by more than 5°F.<sup>BP</sup> At no time shall discharge cause Pajaro River temperature to exceed 68°F in October or November and 57°F in December through April. If the background Pajaro River temperature exceeds 68°F in October or November and 57°F in December through April, then the discharge shall not cause any observable increase in background temperature. Compliance with these temperature limitations shall be evaluated based on peak diurnal hourly temperature readings.<sup>BRE/BPJ</sup>
7. To protect the *spawning, reproduction and/or early development* beneficial use the discharge shall not cause the Pajaro River to have a cadmium concentration exceeding:
  - a) 0.003 mg/l if the receiving water hardness is greater than 100mg/l CaCO<sub>3</sub>, or
  - c) 0.0004 mg/l if the receiving water hardness is less than or equal to 100mg/l CaCO<sub>3</sub> mg/l.<sup>BP</sup>

#### H. GENERAL RECEIVING WATER LIMITS

1. To protect the *municipal and domestic supply* beneficial uses of groundwater underlying the

disposal ponds, the Pajaro River, and groundwater underlying the Pajaro River, secondary and tertiary-treated wastewater discharged from the Facility shall not cause these receiving waters to:<sup>BP/BPJ</sup>

- a) exceed the Primary Maximum Contaminant Levels for organic chemicals set forth in the California Code of Regulations, Title 22, Division 4, Chapter 15, Article 5.5, Section 64444.
- b) exceed the Primary Maximum Contaminant Levels for inorganic chemicals set forth in the California Code of Regulations, Title 22, Division 4, Chapter 15, Article 4, Section 64431.
- c) exceed the levels for radionuclides set forth in the California Code of Regulations, Title 22, Division 4, Chapter 15, Article 5, Section 64443.

#### I. EFFLUENT TOXICITY PROVISIONS

1. When effluent or receiving water toxicity monitoring finds acute toxicity or chronic toxicity above 1 TU, the Discharger shall resample within 10 days and submit the results to the Executive Officer (EO). The EO will determine whether to initiate enforcement action, require the Discharger to implement toxicity reduction evaluation (TRE) requirements, or require the Discharger to implement other measures.<sup>BPJ</sup>
2. A TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemicals responsible for toxicity. These procedures are performed in three phases [characterization, identification, and

confirmation] using aquatic organism toxicity test.)

3. When required, the Discharger shall implement a TRE as outlined in Table 19 below. The U.S. EPA's Toxicity Reduction Evaluation Procedures, Phases 1, 2, and 3 (EPA document numbers: EPA 600/3-88/034, 600/3-88/035, and 600/3-88/036, respectively) and TRE Protocol for Municipal Wastewater Treatment Plans (EPA 600/2-88/062) shall be the basis for this evaluation.<sup>BPJ</sup>

**Table 19 – TRE Implementation**

| Action   | Required                                      |
|--|---|
| Take all reasonable measures to immediately reduce toxicity (if source is known).                        | Within 24 hours of identifying noncompliance. |
| Submit to the EO a TRE plan describing the toxicity-reduction procedures to be employed.                 | Within 60 days of identifying noncompliance.  |
| Initiate the TRE.  | Within 7 days of EO notification.             |
| Conduct the TRE following procedures in the plan.  | Within one year, or as specified in the plan. |
| Submit TRE results, including summary of findings, required corrective action, and all results and data. | Within 60 days of TRE completion.             |
| Implement corrective actions to achieve permit compliance.   | To be determined by EO.                       |
| Return to regular monitoring after implementing corrective measures and after EO approval.               | To be determined by EO.                       |

4. Failure to conduct required toxicity tests or a TRE within a designated period shall result in the establishment of effluent limitations for chronic toxicity in a permit or appropriate enforcement action.<sup>SIP</sup>

#### **J. PRETREATMENT SPECIFICATIONS**

1. The Discharger shall be responsible for the performance of all pretreatment requirements contained in 40 CFR §403 and shall be subject to enforcement actions, penalties, fines, and other remedies by the Environmental Protection Agency (EPA), or other appropriate parties, as provided in the Clean Water Act, as amended (33 USC 1351 et seq.) The Discharger shall implement and enforce its Approved POTW Pretreatment Program. The Discharger's Approved POTW Pretreatment Program is

hereby made an enforceable condition of this Order and Permit. EPA or the State may initiate enforcement standards and requirements as provided in the Clean Water Act.

2. The Discharger shall enforce the requirements promulgated under Sections 307(b), 307(c), 307(d), and 402(b) of the Clean Water Act. The Discharger shall cause industrial users subject to Federal Categorical Standards to achieve compliance no later than the date specified in those requirements or, in the case of a new industrial user, upon commencement of the discharge.
3. The Discharger shall perform the pretreatment functions as required in 40 CFR §403 including, but not limited to:
  - a) Implement the necessary legal authorities as provided in 40 CFR §403.8(f)(1);
  - b) Enforce the pretreatment requirements under 40 CFR §403.5 and §403.6;
  - c) Implement the programmatic functions as provided in 40 CFR §403.8(f)(2); and
  - d) Provide the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR §403.8(f)(3).

#### **K. INFLOW/INFILTRATION PROGRAM**

1. The Discharger or the Cities of Gilroy and Morgan Hill shall each implement Infiltration & Inflow Programs (I/I Program) for portions of the collection system under their jurisdiction. Each I/I Program shall be reviewed and updated as necessary every five years.
2. The I/I Program shall be developed in accordance with good engineering practices with the objective to investigate and correct infiltration and inflow sources that may affect treatment facility operation or possibly result in overflow or exceed pump station capacity.
3. The Cities shall make copies of I/I Program elements available upon request to a representative of the Regional Board.
4. The I/I Program shall include, at a minimum, the following elements:



- a) A map showing collection system lines greater than 12 inches, pump stations, surface water bodies, storm drain inlets, and date of last revision.
- b) A narrative description of projected investigation methods (e.g., televising, smoke testing), frequency, results, and resultant efforts to reduce storm water inflows and sewer line infiltration. Inspection records shall be retained for at least five years.
- c) A program for wet-season manhole inspections. This program shall be structured to identify and correct sewer line blockages during wet season flows to avoid system overflows.
- d) Estimates of fiscal resources necessary for I/I Program implementation as well as actual and five-year projected budget expenses related to I/I Program implementation (i.e., staffing, investigations, replacement of collection system components).
- e) Adequate staff resources to ensure I/I Program implementation and collection system operation. Staff involved in I/I Program implementation shall receive appropriate levels of training.
- f) A description of short- (five years) and long-term (ten years) planning efforts related to the I/I Program.

#### **Inflow/Infiltration Reporting**

1. The Discharger shall provide as part of the treatment facility annual report a section on their Inflow/Infiltration Programs, including:
  - a) A summary description of I/I Program activities for the year;
  - b) A narrative description of progress on correcting inflow and infiltration problems for the previous year, including a map showing areas corrected and a tabulation of sewer lines (diameter and length) that were repaired or replaced;
  - c) An evaluation of I/I related influent flows to the Facility during the previous five wet seasons; and,
  - d) Descriptions of 5-year and 10-year planning activities for the I/I Program,

including available and projected budgets for Program implementation.

#### **L. SPILL PREVENTION PROGRAM**

1. The Cities of Gilroy and Morgan Hill and SCRWA shall each implement Spill Prevention Programs (Spill Programs) for portions of the collection, treatment, and disposal systems under their jurisdiction. Each Spill Program shall be reviewed and updated as necessary every five years.
2. Spill Programs shall be developed in accordance with good engineering practices with the objective to implement spill prevention measures and collection system management practices to ensure overflows and contribution of pollutants or incompatible wastes to Discharger's treatment system are minimized.
3. Each entity shall make copies of Spill Program elements available upon request to a representative of the Regional Board.
4. Spill Programs shall include, at a minimum, the following elements:
  - a) A map showing collection system lines greater than 12 inches, pump stations, standby power facilities, surface water bodies (including discharge point(s) where pump station overflows may occur), storm drain inlets, and date of last revision.
  - b) A program to ensure all sewer lines are cleaned and flushed as often as necessary to maintain proper system operation. The minimum frequency for flushing the entire system is once every two years, unless it can be demonstrated that this frequency is inappropriate.
  - c) A program for identifying and correcting sanitary sewer system capacity and structural integrity deficiencies. This program shall include visual inspection methods, system capacity analyses/modeling, and flow, population, and land use forecasting, as appropriate. Once capacity deficiencies have been identified, appropriate action shall be scheduled to correct the problem. The projected schedule should list each project

- or reach of conveyance to be replaced along with estimated start and completion dates. Planning efforts for corrective action should address short-term (five-year) and long-term (ten-year) periods.
- d) A spill response and contingency program to ensure efficient, consistent, and appropriate response to spills. This program shall address, at a minimum, spill posting, containment and cleanup measures, agency notification, and methods for spill quantity estimation.
  - e) A program for reporting spills to the Regional Board. Sewage spills greater than 1,000 gallons and all sewage spills that enter a waterbody of the State, or occur where public contact is likely, regardless of the size, shall be reported to the Regional Board by phone within 24 hours of the incident. A written report shall be submitted to the Regional Board within five days of the spill. Spills under 1,000 gallons that do not enter a waterbody shall be reported to the Regional Board within 30 days.
  - f) A program for spill tracking, to include annual lists of spills or system problems during the previous year, cleanups, amounts, location, and efforts to ensure similar spills or problems do not recur. A tracking or follow-up procedure shall be used to ensure appropriate response has been taken. Inspections and maintenance activities shall be documented and recorded.
  - g) An ongoing pump station maintenance program to ensure consistent system operation. Alternate power supplies shall be provided for each pump station. Maintenance, inspection, and spill response logs shall be kept to track operational problems and overflows at each pump station.
  - h) A spill alarm program addressing the current or proposed alarm system (or why such a system is unnecessary), central information location, staffing and response times for detecting spills from the system.
  - i) Estimates of fiscal resources necessary for Spill Program implementation as well as actual and five-year projected budget expenses related to Spill Program implementation (i.e., staffing, investigations, replacement of collection system components). Current and five-year projected sewer assessment fees necessary for Spill Program implementation shall be evaluated.
  - j) Adequate staff resources to ensure Spill Program implementation and collection system operation. Staff involved in Spill Program implementation shall receive appropriate levels of training.
  - k) A description of short-term (five-year) and long-term (ten-year) planning efforts related to the Spill Programs.
- Spill Prevention Reporting**
1. SCRWA, for Cities of Gilroy and Morgan Hill, shall provide as part of the treatment facility annual report, a section on each entity's Spill Prevention Program, including:
    - a) A summary description of Spill Program activities for the year;
    - b) A summary of spills, causes, estimated quantities, and follow-up responses during the year, including a map showing areas where spills occurred and any affected water bodies;
    - c) A narrative description of progress on correcting capacity or structural integrity deficiencies in the collection system for the previous year, including a map showing areas corrected and a tabulation of sewer lines (diameter and length) that were repaired or replaced; and,
    - d) Descriptions of 5-year and 10-year planning activities for the Spill Program, including available and projected budgets for Program implementation.
- M. SALT MANAGEMENT PROGRAM**
1. The Discharger shall implement a salts management program with the intent of reducing mass loading of salt in treated effluent to a level that will ensure compliance with effluent limitations and not negatively

impact beneficial uses of groundwater. Salt reduction measures should focus on all potential salt contributors to the collection system, including residential, commercial, and industrial dischargers. As part of the salts management program, the Discharger shall provide an annual evaluation of salt reduction efforts. This evaluation shall include, at a minimum:

- a) Calculations of annual salt mass discharged to the percolation ponds;
- b) Analysis of ground and surface water monitoring results related to salt constituents;
- c) Analysis of potential impacts of salt loading on the groundwater basin and Llagas Creek;
- d) A summary of existing salt reduction measures; and,
- e) Recommendations and time schedules for implementation of any additional salt reduction measures.

The annual evaluation may be included as part of the annual monitoring report.

## N. GENERAL PROVISIONS

1. Physical facilities shall be designed and constructed according to accepted engineering practices and shall be capable of full compliance with this Order when properly operated and maintained. Operation and maintenance of the wastewater system shall conform to the Operations Plan, which shall be periodically reviewed, and, if appropriate, revised. The Operations Plan is subject to review by the Executive Officer, who shall be provided a current copy within ten days of any significant revision.
2. The Discharger shall submit for EO approval a design report for the river discharge effluent pipeline and outfall. The design report must be submitted at least 60 days prior to pipeline construction and should include:
  - a) identification of final outfall location and associated design details;

- b) identification of proposed upstream and downstream receiving water monitoring stations and near discharge point gauging station;
- c) survey results identifying any river bank dispersive soils within a 1,000 foot reach downstream of the outfall location which may be impacted by the discharge;
- d) proposed methods for mitigating potential adverse environmental impacts associated with discharge-related bank erosion from the point of discharge to a location 1,000 feet downstream, and;
- e) outfall monitoring and maintenance plan.

3. The Discharger shall conduct self-monitoring of its discharge in compliance with "Monitoring and Reporting Program No. R3-2004-0099," as ordered by the Executive Officer. The Monitoring and Reporting Program is required pursuant to California Water Code Section 13267 and the State Implementation Policy. The purpose of this monitoring is to measure the quantity and quality of the discharge, evaluate impacts to receiving waters, and determine compliance with this discharge permit. Evidence that supports requiring this monitoring includes existing effluent and receiving water data. <sup>BPI, PC, SIP</sup>

4. The Discharger shall modify Llagas Creek surface water monitoring station locations as identified in Attachment E and stipulated in Monitoring and Reporting Program No. R3-2004-0099.
5. Discharger shall comply with all items of the attached "Standard Provisions and Reporting Requirements for National Pollutant Discharge Elimination System Permits," dated January 1985. Paragraph (a) of item E.1 shall apply only if the bypass is for essential maintenance to ensure efficient operation. <sup>BPI, 40CFR(§122.41)</sup>
6. Any significant change in effluent quantity or quality shall be cause for reevaluation of effluent limitations. <sup>SIP</sup>
7. The Regional Board may modify this permit, or revoke and reissue a Discharge permit, if a reportable priority pollutant is detected

through special condition monitoring (including, but not limited to, fish tissue sampling, whole effluent toxicity tests, monitoring requirements on internal waste streams, and monitoring for surrogate parameters). Additional requirements may be included in the permit as a result of the special condition monitoring data.<sup>SIP</sup>

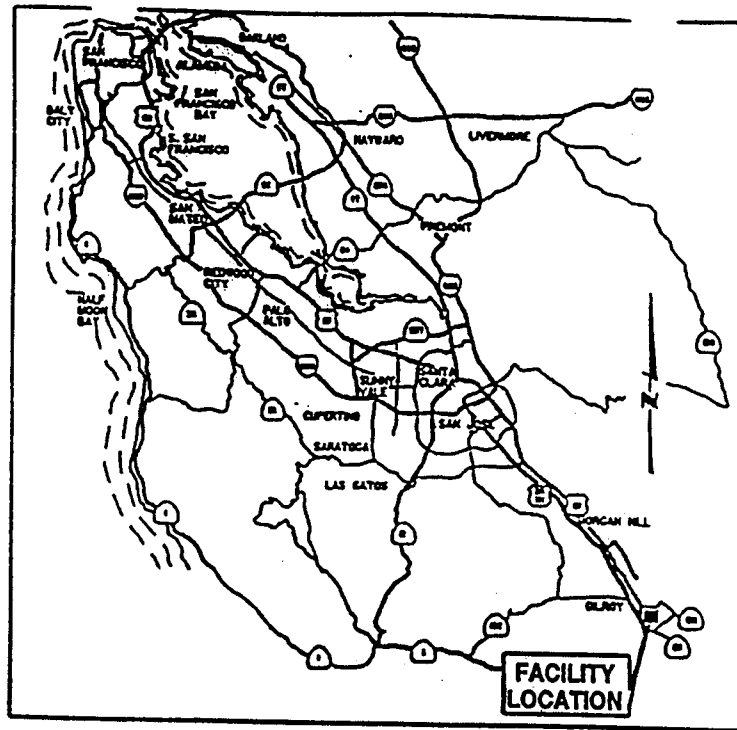
8. This Permit may be modified in accordance with the requirements set forth at 40 CFR Parts 122 and 124, to include appropriate conditions or limits based on newly available information, or to implement any new State water quality objectives that are approved by the U.S. EPA.
9. The requirements prescribed by this Order supersede the requirements prescribed by Order No. 99-29, adopted by the Board on May 21, 1999. Order No. 99-29 is hereby rescinded.
10. This Permit shall take effect on October 31, 2004 (51 days after adoption) or, if later, the date on which the litigation described in General Finding 113 has been completely resolved, as determined in writing by the Executive Officer. Complete resolution includes, for example, dismissal of all claims and, if necessary, a stipulated order signed by the trial court that this permit is a satisfactory return to the writ.
11. This Order expires September 10, 2009, and the Discharger must file a Report of Waste Discharge in accordance with Title 23, Chapter 3, Subchapter 9, of the California Administrative Code, no later than February 1, 2009.

I, **Roger W. Briggs**, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Coast Region, on September 10, 2004.

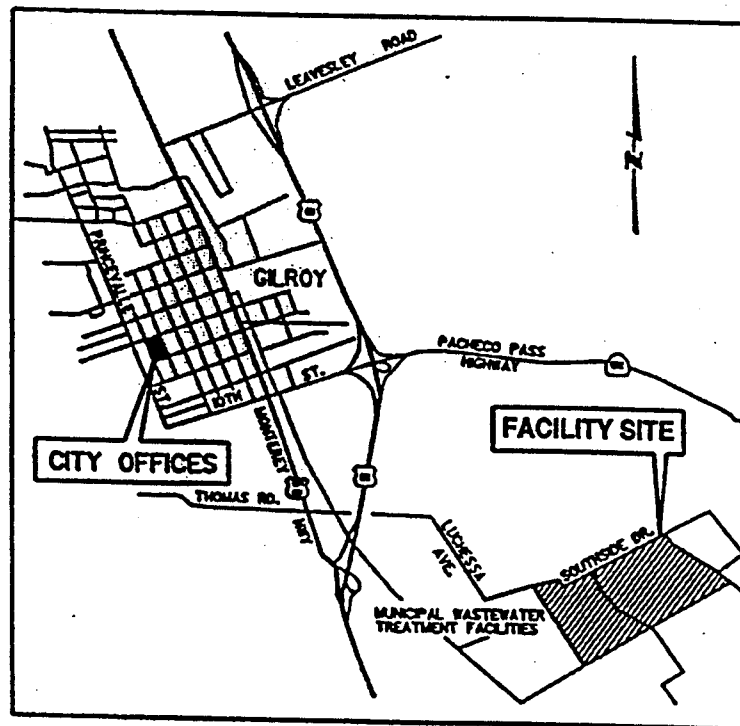
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Executive Officer

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Pajaro Discharge\R3-2004-0099\R3-2004-0099 WDR mtk  
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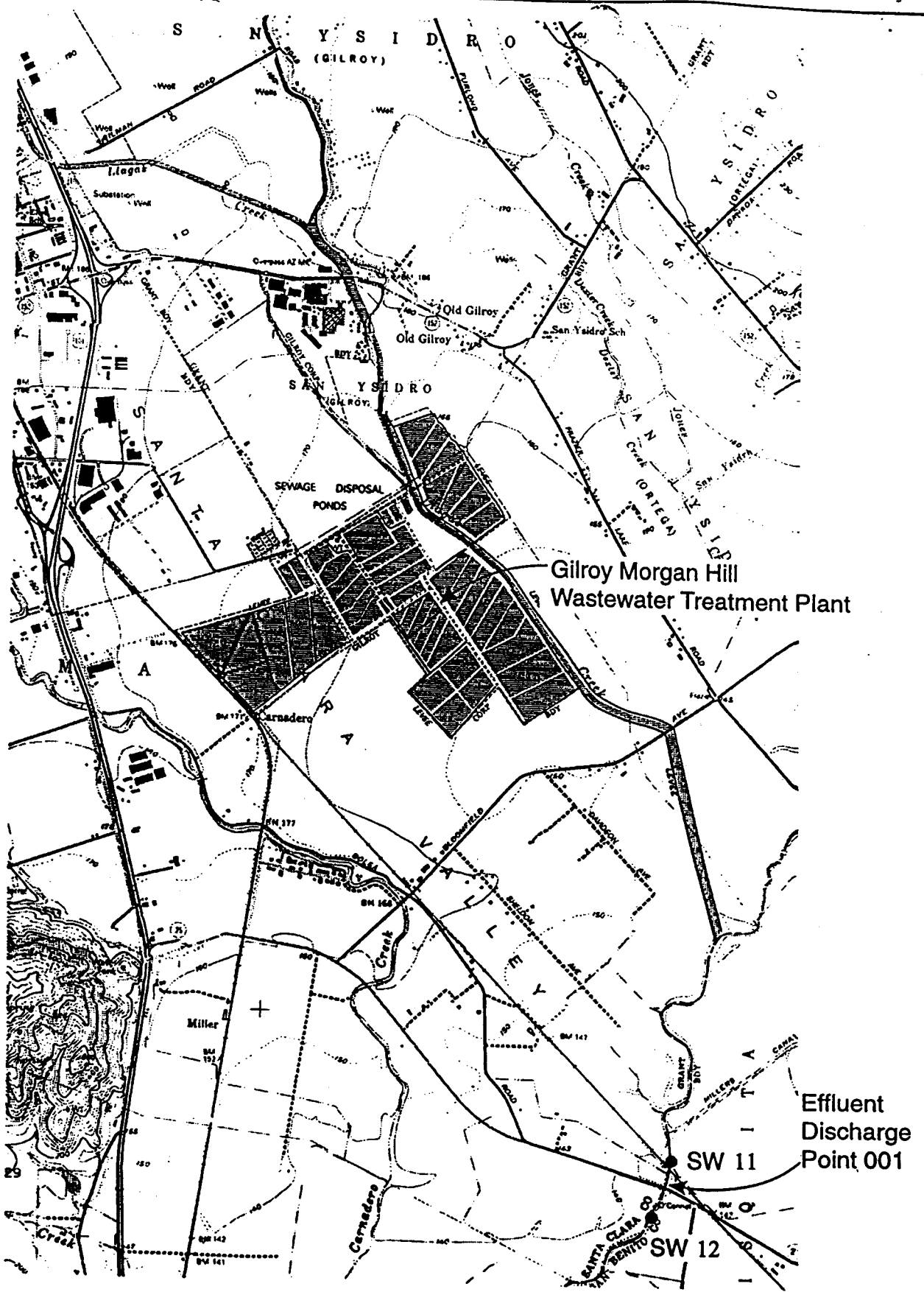


**LOCATION MAP**  
NO SCALE



**VICINITY MAP**  
NO SCALE

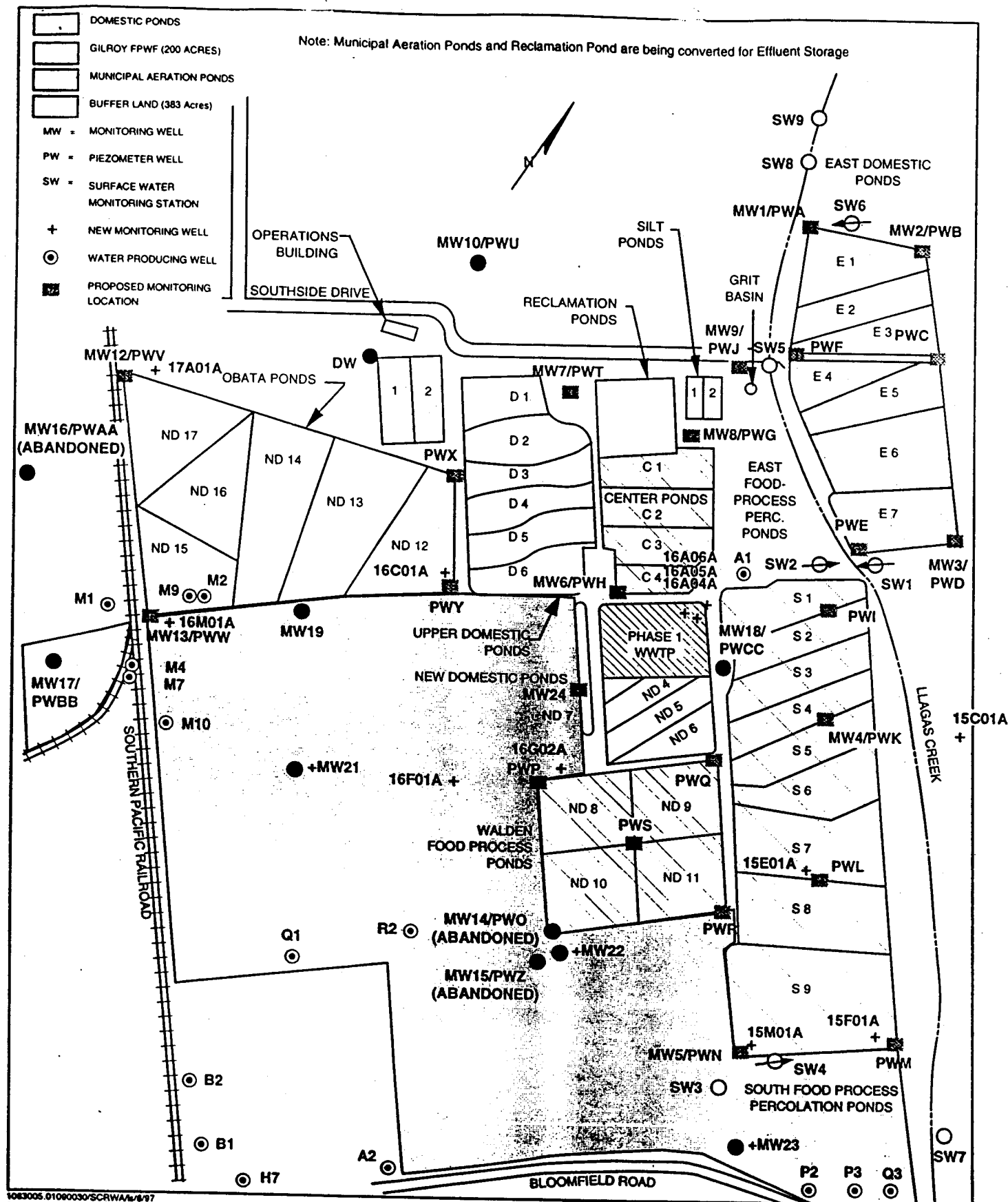
SOUTH COUNTY REGIONAL WASTEWATER AUTHORITY  
TREATMENT/RECYCLING FACILITY LOCATION  
**ATTACHMENT "A"**



SOUTH COUNTY REGIONAL WASTEWATER AUTHORITY

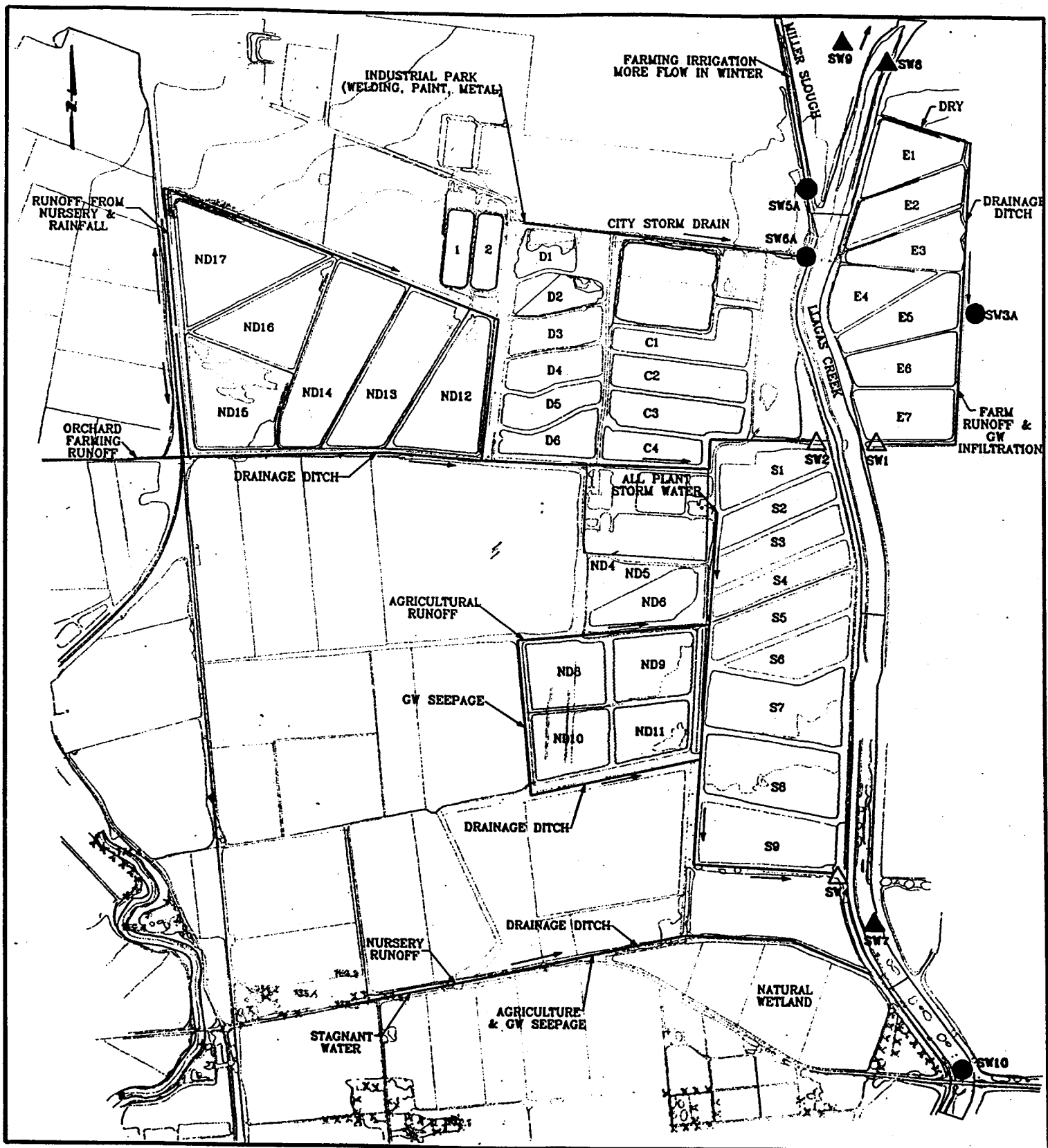
PROPOSED DISCHARGE LOCATION

ATTACHMENT "B"



**SOUTH COUNTY REGIONAL WASTEWATER AUTHORITY**  
**GROUNDWATER AND SURFACE WATER MONITORING LOCATIONS**  
**Monitoring for Groundwater Level**

## Attachment C



**South County Regional Wastewater Authority  
Surface Water Monitoring Locations (Revised)  
ATTACHMENT "D"**



## **APPENDIX C**

**Regional Water Quality Control Board Master Water  
Reclamation Requirements Order Number 98-052.**

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL COAST REGION  
81 Higuera Street, Suite 200  
San Luis Obispo, California 93401-5427**

**MASTER WATER RECLAMATION REQUIREMENTS ORDER NO. 98-052  
Waste Discharger Identification No. 3 430100003**

**FOR**

**SOUTH COUNTY REGIONAL WASTEWATER AUTHORITY  
AND INDIRECT USERS  
SANTA CLARA COUNTY**

The California Regional Water Quality Control Board, Central Coast Region (hereafter Board), finds that:

1. The South County Regional Wastewater Authority (hereafter referred to as the "SCRWA") owns and operates a wastewater collection, treatment, disposal, and water recycling facility (hereafter referred to as the "Facility").

The treatment consists of influent screening, aerated grit removal, nitrification, denitrification, oxidation using an oxidation ditch, and secondary clarification. Plant effluent can be discharged to 370 acres of percolation/evaporation ponds.
2. The Facility is located in South Santa Clara County along Southside Drive, approximately two miles southeast of the City of Gilroy (Sections 9, 15, 16 & 17, T11S, R4E, MD B&M) as shown on Attachment "A" of this Order.
3. The Facility serves the domestic sanitary wastewater pretreatment, collection, treatment and disposal needs of the Cities of Gilroy and Morgan Hill (hereafter referred to as the "Cities"). That aspect of the Facility is regulated under a separate Order issued by the Regional Board and is not the subject of this Order.
4. The Facility discharges stormwater flows directly to surface waters and has applied for a separate stormwater discharge permit under the State Water Resources Control Board's Water Quality Order No. 97-03-DWQ National Pollutant Discharge Elimination System General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities.
5. SCRWA treats an average dry weather flow (ADWF) of 7.5 million gallons per day (MGD) using an advanced secondary treatment process.
6. SCRWA can divert up to three MGD of the secondary effluent to a tertiary treatment process which meets the water reclamation criteria of the State Department of Health Services (Title 22, Division 4, Chapter 3, Sections 60301-60355 of the California Code of Regulations). The tertiary treatment process consists of coagulation, filtration, chlorination, then dechlorination. A portion of the tertiary treated wastewater is used onsite for landscape irrigation in-plant process water, and to supply the fire protection system.
7. SCRWA has plans to increase tertiary treatment capacity to 15 MGD.
8. The Facility augments the water resources needs of the Cities and the Santa Clara Valley Water District (hereafter referred to as the "SCVWD") by supplying recycled water to those entities. For purposes of this Order, the SCRWA is hereafter referred to as the "Producer" of recycled water. Historic water recycling has been regulated by Waste Discharge Requirements Order No. 85-82, adopted by the Regional Water Quality Control Board on May 10, 1985.

9. Agents for SCRWA filed a Report of Waste Discharge on April 4, 1997, for authorization to use up to 15 MGD of disinfected tertiary recycled water in conformance with water reclamation criteria contained in California Code of Regulations, Title 22.
10. The Producer will authorize specific reuse projects on a case-by-case basis in accordance with an approved permit-based program of rules and regulations for recycled water users. The Producer will use existing recycled water transmission facilities as shown in Attachment B to transport recycled water to Users. The Producer will also design and incrementally install recycled water transmission facilities to serve other, future projects.
11. Users will document compliance with all conditions of the Order and of Title 17 and Title 22 of the California Code of Regulations (CCR). Each User will demonstrate to the Producer the absence of cross-connections before being issued a permit. The Producer will maintain this information at its facility.
12. The Producer will continue to investigate other potential reuse strategies such as groundwater recharge, surface water augmentation, and dual water supply for new construction. This will enable the Producer to move towards achieving a goal of reusing the maximum possible amount of recycled water.
13. On July 14, 1992, the Governor approved Assembly Bill No. 3012 (AB 3012), which added Section 13523.1 to the California Water Code, and authorizes regional boards to issue master reclamation permits to a supplier and/or distributor of recycled water in lieu of prescribing water reclamation requirements for a user of recycled water. AB 3012 also removes the requirement, except upon written request of a regional board, that the Users file a report with a regional board to use Recycled water from a supplier/distributor for whom a master reclamation permit has been issued. Similarly, AB 3012 exempts any such user of recycled water from the requirement to file a report with a regional board related to any material change in the character of the recycled water or its use. This Order is intended to be a master reclamation permit that is consistent with Section 13523.1.
14. California Water Code Section 13512 states that it is the intention of the legislature that the State undertake all possible steps to encourage development of water reclamation facilities so that recycled water may be made available to help meet the growing water demands of the State.
15. California Water Code Section 13523 provides that a regional board, after consulting with and receiving the recommendations of the State Department of Health Services, and if it determines such action to be necessary to protect the public health, safety, or welfare, shall prescribe water reclamation requirements for water which is used or proposed to be used as recycled water. The use of recycled water could affect the public health, safety, or welfare, and requirements for those uses are, therefore, necessary in accordance with the California Water Code.
16. In California Water Code Section 13550, the Legislature defines the use of potable domestic water for non-potable uses, including but not limited to cemeteries, golf courses, parks, highway landscaped areas, irrigation, and industrial uses as a waste or an unreasonable use of such water within the meaning of Section 2 of Article X of the California Constitution when suitable Recycled water is available.
17. California Water Code Section 13576(e) states that the use of recycled water has proven to be safe from a public health standpoint and that the State Department of Health Services is updating regulations for the use of recycled water.
18. This Order's requirements conform with and implement the water reclamation criteria of the State Department of Health Services (Title 22, Division 4, Chapter 3, Sections 60301-60355 of the California Code of Regulations [CCR]) to protect the public health, safety, and welfare.

19. State Department of Health Services' criteria for use of recycled water is in Title 22, Chapter 3, of the California Code of Regulations. The Board has consulted with the Department of Health Services regarding the regulation of this discharge.
  20. The Water Quality Control Plan, Central Coastal Basin (Basin Plan) was adopted by the Board on September 8, 1994. The Basin Plan incorporates State Board plans and policies by reference and contains a strategy for protecting beneficial uses of State waters.
  21. Federal regulations require effluent limitations for all pollutants that are or may be discharged at a level that will cause or have reasonable potential to cause, or contribute to in-stream excursions above narrative or numerical water quality standards. Based on information submitted as part of the application, in studies, and as directed by monitoring and reporting programs, the Board finds that the discharge does not have a reasonable potential to cause or contribute to an in-stream excursion above a water quality objective.
  22. Existing and anticipated beneficial uses of ground water in the vicinity of the discharge include:
    - a. Domestic water supply;
    - b. Agricultural water supply
    - c. Industrial process supply; and,
    - d. Industrial service supply.
  23. Present and anticipated beneficial that could be affected by the discharge include:
    - a. Municipal and Domestic Supply;
    - b. Agricultural Water Supply;
    - c. Industrial Service Supply;
    - d. Groundwater Recharge;
    - e. Water Contact Recreation;
    - f. Non-Contact Water Recreation;
    - g. Wildlife Habitat;
    - h. Cold Freshwater Habitat;
    - i. Warm Freshwater Habitat;
    - j. Migration of Aquatic Organisms;
    - k. Spawning, Reproduction, and/or Early Development;
    - l. Preservation of Habitats of Special Significance;
    - m. Rare, Threatened, or Endangered Species;
    - n. Estuarine Habitat;
    - o. Freshwater Replenishment;
    - p. Navigation;
    - q. Commercial and Sport Fishing; and
    - r. Shellfish Harvesting.
  24. These waste discharge requirements are for an existing facility and are exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.) in accordance with Section 15301, Chapter 3, Title 14, of the California Code of Regulations.
  25. A permit and the privilege to discharge waste into waters of the State is conditional upon the discharge complying with provisions of Division 7 of the California Water Code and of the Clean Water Act (as amended or as supplemented by implementing guidelines and regulations) and with any more stringent effluent limitations necessary to implement water quality control plans, protect beneficial uses, and prevent nuisance. Compliance with this Order should assure conditions are met and mitigate any potential changes in water quality due to the project.
  26. The Board has notified the Producer and interested persons of its intent to prescribe waste discharge requirements and water reclamation requirements for the proposed discharges, and provided them with an opportunity for a public hearing and to submit their written views and recommendations.
  27. The Board, at a public meeting held May 29, 1998, heard and considered all comments pertaining to the discharge and found this Order consistent with the above findings.
- IT IS HEREBY ORDERED**, pursuant to authority in Section 13377 of the California Water Code, that South County Regional Wastewater Authority, its agents, successors, and assigns, may discharge waste

from its wastewater treatment plant providing it complies with the following:<sup>a</sup>

#### A. PROHIBITIONS

1. The treatment, storage, distribution, or reuse of recycled water shall not create a nuisance as defined in section 13050(m) of the California Water Code.<sup>CWC</sup>
2. No recycled water used for irrigation shall be applied during periods of rainfall or when soils are saturated such that runoff occurs.<sup>BPJ</sup>
3. No recycled water used for irrigation shall be allowed to escape to areas outside the designated use areas by surface flow or by airborne spray.<sup>DHS</sup>
4. Recycled water shall be confined to areas of authorized use without discharge to surface waters or drainageways.<sup>BPJ</sup>
5. Spray, mist, or runoff shall not enter a dwelling or food handling facility, and shall not contact any drinking fountain, or designated outdoor eating areas.<sup>DHS</sup>
6. No recycled water shall be discharged from the treatment facilities, irrigation holding tanks, storage ponds, or other containment, other than for irrigation or industrial reuse in accordance with this Order, Waste Discharge Requirements for the Producer, or for discharge to a municipal sewage collection system.<sup>BPJ</sup>
7. There shall be no cross-connections between the potable water supply and pipes containing recycled water. Supplementing recycled water with water used for domestic supply shall not be allowed except through an air-gap separation. In accordance with CCR Title 17, Section 7604, a reduced pressure principle backflow device shall be provided at premises where recycled water is used and there is no interconnection with the potable water system. This requirement does not apply to individual residences using recycled water for landscape irrigation as part of an approved dual plumbed use area as defined in CCR Title 22, Section 60312.<sup>DHS</sup>
8. Personnel involved in producing, transporting, or using recycled water shall be informed of possible health hazards that may result from contact and use of recycled water.<sup>DHS</sup>
9. Delivery of recycled water shall cease during any period these Reclamation Specifications cannot be met.<sup>BPJ</sup>
10. Spray irrigation of recycled water shall be accomplished at a time and in a manner to minimize ponding and the possibility of public contact with sprayed materials.<sup>DHS</sup>
11. All reclamation reservoirs and other areas with public access shall be posted (in English and Spanish) to warn the public recycled wastewater is being stored or used.<sup>DHS</sup>
12. Recycled water systems shall be properly labeled and regularly inspected to assure proper operation, absence of leaks, and absence of illegal connections.<sup>DHS</sup>
13. A minimum freeboard of two feet shall be maintained in the reclamation storage ponds.<sup>BPJ</sup>
14. Recycled water shall not be stored or applied to any areas located within 100 feet of any well used for domestic purposes.<sup>BPJ</sup>
15. For golf course use, the score cards must clearly state that reclaimed water is used for irrigation.<sup>DHS</sup>
16. Hydraulic and constituent (Nitrogen, etc.) loading rates for reclamation uses shall be based on crop consumption and tolerance and shall not exceed what is reasonable for production of the crop.<sup>BPJ</sup>

<sup>a</sup> General permit conditions, definitions and the method of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for National Pollutant Discharge Elimination System Permits," dated January 1985, included as part of this Order.

**B. RECYCLED WATER LIMITATIONS**

1. The Producer shall assure that treated effluent put to use for disinfected tertiary recycled water shall be an adequately oxidized, filtered, and disinfected water, as defined in CCR Title 22, Division 4, Chapter 3, Sections 60301-60335, or alternatively defined and approved by State Department of Health Services (DHS).
2. The Producer shall discontinue delivery of recycled water to Users during any period which it has reason to believe that the limits established in Section B of this Order are not being met. The delivery of recycled water shall not be resumed until all conditions which caused the limits to be violated have been corrected. <sup>BPJ</sup>
3. The State Department of Health Services is currently revising the Title 22 regulations for water reuse. When revised regulations are finalized, the Executive Officer may authorize changes to the restricted and unrestricted recycled water uses consistent with those regulations. <sup>DHS</sup>
4. Monthly average flow volumes shall not exceed 15.0 MGD or the total monthly demand of the primary users. <sup>ROWD</sup>
5. Tertiary treated recycled water shall not exceed the limits<sup>A</sup> of Table 4 - Disinfected Tertiary Recycled Water Limits
6. Recycled Water shall not have turbidity which exceeds the following limits. <sup>DHS</sup>
  - a. Daily average turbidity must be less than or equal to 2 NTU,
  - b. turbidity shall not exceed 10 NTU at any time, and
  - c. turbidity must not exceed 5 NTU for more than five percent of the time.
7. Recycled water shall not contain total coliform concentrations exceeding the following limits. <sup>DHS</sup>
  - a. the seven-day median concentration must not exceed an MPN of 2.2/100 ml,
  - b. concentrations must not exceed 23/100 ml in more than one sample taken over a 30-day range,
  - c. concentrations must be less than 240/100 ml at all times.
8. Recycled Water shall have a CT value (chlorine concentration times modal contact time) of not less than 450 mg-min/l at all times with a modal contact time of at least 90 minutes based on 9.0 MGD. <sup>DHS</sup>
9. Recycled water shall not exceed the limits of Table 5 - Maximum Contaminant Levels (see below).

**C. PROVISIONS**

1. This Order supersedes Order No. 85-82 for all uses specified by that Order. Order No. 85-82 is hereby rescinded.
2. The Producer has established rules and regulations for reclaimed water Users governing the design and construction of reclaimed water use facilities and the use of reclaimed water, in accordance with the uniform statewide reclamation criteria established pursuant to California Water Code Section 13521, and subject to the Department of Health Services and Executive Officer review and approval. The Producer has also developed and submitted administrative procedures specifying how the reclaimed water rules and regulations and permit-based system for regulating users will be implemented.

**Table 4- Disinfected Tertiary Recycled Water Limits (mg/l)**

| Parameter              | Daily Max | 30-Day Mean | 7-Day Mean |
|------------------------|-----------|-------------|------------|
| BOD <sub>5</sub>       | 20        | 10          | --         |
| Total Suspended Solids | 20        | 10          | --         |
| Nitrate as N           | 10        | 5           | --         |

6. Recycled Water shall not have turbidity which exceeds the following limits. <sup>DHS</sup>
  - a. Daily average turbidity must be less than or equal to 2 NTU,
  - b. turbidity shall not exceed 10 NTU at any time, and

Table 5- Maximum Contaminant Levels (mg/l, unless indicated otherwise)

| Constituent                                | Primary MCL           | Constituent  | Primary MCL  |
|--|-----------------------|--|--------------|
| <b>ORGANICS</b>                            |                       |  |              |
| Alachlor (Alanex)                          | 0.002                 | Heptachlor   | 0.00001      |
| Atrazine (Aatrex)                          | 0.003                 | Heptachlor epoxide   | 0.00001      |
| Bentazon (Basagran)                        | 0.018                 | Hexachlorobenzene  | 0.001        |
| Benzene                                    | 0.001                 | Hexachlorocyclopentadiene  | 0.05         |
| Benzo(a)pyrene                             | 0.0002                | Lindane (gamma-BHC)  | 0.0002       |
| Carbofuran (Furadan)                       | 0.018                 | Methoxychlor   | 0.04         |
| Carbon tetrachloride                       | 0.0005                | Molinate (Ordam)   | 0.02         |
| Chlordane                                  | 0.0001                | Monochlorobenzene (Chlorobenzene)  | 0.07         |
| 2,4-D                                      | 0.07                  | Oxamyl   | 0.2          |
| Dalapon                                    | 0.2                   | Pentachlorophenol  | 0.001        |
| 1,2-Dibromo-3-chloropropane (DBCP)         | 0.0002                | Picloram   | 0.5          |
| 1,2-Dichlorobenzene (o-Dichlorobenzene)    | 0.6                   | Polychlorinated biphenyls (PCBs)   | 0.0005       |
| 1,4-Dichlorobenzene (p-DCB)                | 0.005                 | Simazine (Princep)   | 0.004        |
| 1,1-Dichloroethane (1,1-DCA)               | 0.005                 | Styrene (Vinylbenzene)   | 0.1          |
| 1,2-Dichloroethane (1,2-DCA)               | 0.0005                | 2,4,5-TP (Silvex)  | 0.05         |
| 1,1-Dichloroethylene (1,1-DCE)             | 0.006                 | 2,3,7,8-TCDD (Dioxin)  | 0.00000003   |
| cis-1,2-Dichloroethylene                   | 0.006                 | 1,1,2,2-Tetrachloroethane  | 0.001        |
| trans-1,2-Dichloroethylene                 | 0.01                  | Tetrachloroethylene (PCE)  | 0.005        |
| Dichloromethane (Methylene chloride)       | 0.005                 | Thiobencarb (Bolero) <sup>a</sup>  | 0.07         |
| 1,2-Dichloropropane (Propylene dichloride) | 0.005                 | Toluene (Methylbenzene)  | 0.15         |
| Di(2-ethylhexyl)adipate                    | 0.4                   | Toxaphene  | 0.003        |
| 1,3-Dichloropropene                        | 0.0005                | 1,2,4-Trichlorobenzene (Unsym-Trichlorobenzene)                              | 0.07         |
| Di(2-ethylhexyl)phthalate (DEHP)           | 0.004                 | 1,1,1-Trichloroethane (1,1,1-TCA)  | 0.200        |
| Dinoseb                                    | 0.007                 | 1,1,2-Trichloroethane (1,1,2-TCA)  | 0.005        |
| Diquat                                     | 0.02                  | Trichloroethylene (TCE)  | 0.005        |
| Endrin                                     | 0.002                 | Trichlorofluoromethane (Freon 11)  | 0.15         |
| Endothal                                   | 0.1                   | 1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)                            | 1.2          |
| Ethylbenzene (Phenylethane)                | 0.7                   | Sum of bromodichloromethane, dibromochloromethane, bromoform, and chloroform | 0.1          |
| Ethylene dibromide (EDB)                   | 0.00005               | Vinyl chloride   | 0.0005       |
| Glyphosate                                 | 0.7                   | Xylenes (single isomer or sum of isomers)                                    | 1.750        |
| <b>INORGANICS</b>                          |                       |  |              |
| Aluminum                                   | 1                     | <b>Fluoride</b>  |              |
| Antimony                                   | 0.006                 | Annual ave. of max. daily air temperature                                    |              |
| Arsenic                                    | 0.05                  | <53.7 degrees Fahrenheit (°F)  |              |
| Asbestos                                   | 7 MFL <sup>c</sup>    | 53.8 to 58.3 °F  | 2.4          |
| Barium                                     | 1                     | 58.4 to 63.8 °F  | 2.2          |
| Beryllium                                  | 0.004                 | 63.9 to 70.6 °F  | 2.0          |
| Cadmium                                    | 0.005                 | 70.7 to 79.2 °F  | 1.8          |
| Chromium                                   | 0.05                  | 79.3 to 90.5 °F  | 1.6          |
| Cyanide                                    | 0.2                   |  | 1.4          |
| Mercury                                    | 0.002                 |  |              |
| Nickel                                     | 0.1                   |  |              |
| Nitrate (as NO3)                           | 45                    |  |              |
| Nitrate + Nitrite (sum as nitrogen)        | 10                    |  |              |
| Nitrite (as nitrogen)                      | 1                     |  |              |
| Selenium                                   | 0.05                  |  |              |
| Thallium                                   | 0.002                 |  |              |
| <b>RADIOISOTOPES</b>                       |                       |  |              |
| Gross alpha particle activity <sup>d</sup> | 15 pCi/L <sup>e</sup> | Strontium-90   | 8 pCi/L      |
| Gross beta particle activity               | 50 pCi/L              | Tritium  | 20,000 pCi/L |
| Combined Radium-226 and Radium-228         | 5 pCi/L               | Uranium  | 20 pCi/L     |

<sup>a</sup> Also listed w/Secondary MCL of 0.001 mg/L.<sup>c</sup> MFL = million fibers per liter, MCL is for fibers exceeding 10 microns in length.<sup>d</sup> Including radium-226 but excluding radon and uranium.<sup>e</sup> pCi/L = picocuries per liter

3. Reclaimed Water Use permits, issued by the Producer in accordance with approved rules and regulations, form the basis of permitted reclaimed water use by specific Users. Reclaimed Water Use permits shall specify self-monitoring requirements for each User. If someone other than the User is responsible for applying the reclaimed water (Distributor), e.g. a truck hauler, then the User shall inform them of these requirements in a written permit or other suitable manner. a Distributor shall fill out a Reclaimed Water Release Form when receiving reclaimed water from the Producer.
4. A copy of the Reclaimed Water Use permit and the Order must be provided to the Users by the Producer. The Users must have these available at all times for inspection by Regional Board staff, the Producer, or State/County Health Officers. The Distributors must carry the Reclaimed Water Release Form at all times.
5. The Producer shall comply with the self-monitoring program as adopted by the Board and as may be amended by the Executive Officer. The Producer is responsible for collecting reports from Users. Users are responsible for submitting on-site observation reports and use data to the Producer, who will compile and file self-monitoring reports with the Regional Board. The Producer, at its discretion, may assume the User's responsibility for on-site observation reports and use data.
6. The Producer will be responsible for ensuring that reclaimed water meets the quality standards of this Order and for operation and maintenance of major transport facilities and associated appurtenances. Users will be responsible for the application of reclaimed water on their respective use areas and associated operations and maintenance. The Producer will conduct periodic inspections of User facilities to monitor compliance with the conditions of the Producer's issued permit and this Order.
7. The Producer and Users shall maintain in good working order and operate as efficiently as possible any facility or control system installed by the Producer or Users to achieve compliance with the water reclamation requirements.
8. The Producer, Users, and distributors shall receive employee training to assure proper operation of reclamation facilities, worker protection, and compliance with this Order. In accordance with CCR Title 17, Section 7586, each User shall designate a Reclaimed Water Supervisor responsible for compliance with permit conditions.
9. The Producer shall assure that the backflow preventers are in proper working order by testing initially and annually thereafter, in accordance with CCR Title 18, Section 7605. Reports of testing and maintenance shall be maintained by the Producer.
10. The Producer and Users shall assure that all above ground equipment, including pumps, piping, storage reservoir, and valves, etc. which may at any time contain reclaimed water shall be adequately and clearly identified with warning signs. The Producer and Users shall make all necessary provisions to inform the public that the liquid being distributed is reclaimed water and is unfit for human consumption.
11. Reclamation facilities shall be operated in conformance with the California Department of Health Services' "Guidelines for Use of Reclaimed Wastewater for Irrigation and Impoundment," "Guidelines for Worker Protection at Reclamation Use Areas," the American Water Works Association, California-Nevada Section's *Guidelines for the Distribution of Non-potable Water*, and the Producer's approved reclaimed water use rules and regulations (which may clarify and/or modify the above guidelines) and the appropriate local administrative procedures.
12. The Producer and Users shall permit the Board or its authorized representative in accordance with California Water code section 13267(c):
  - Entry upon premises where a regulated facility or activity is located or conducted,



- or where records are kept under the conditions of the Order,
- Access to and copy of any records that must be kept under conditions of this Order,
  - Inspection of any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order,
  - To photograph, sample, and monitor for the purpose of assuring compliance with this Order.
13. The Discharger shall comply with "Monitoring and Reporting Program No. 98-052," as specified by the Executive Officer.
14. The Discharger shall comply with all items of the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated January 1984.
15. The Board will revise this Order periodically and may revise these requirements when necessary.
16. Pursuant to Title 23, Division 3, Chapter 9, of the California Code of Regulations, the Discharger must submit a written report to the Executive Officer not later than December 5, 2012 addressing:<sup>c</sup>
- a. Whether there will be changes in the continuity, character, location, or volume of the discharge; and,
  - b. Whether, in their opinion, there is any portion of the Order that is incorrect, obsolete, or otherwise in need of revision.

I, **ROGER W. BRIGGS, Executive Officer**, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Coast Region, on May 29, 1998.

  
Executive Officer

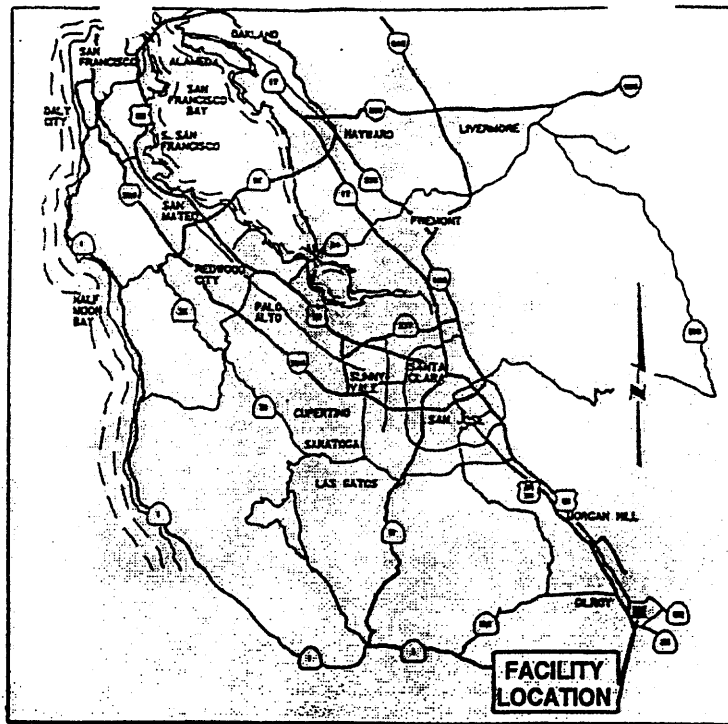
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CWC California Water Code, Division 7

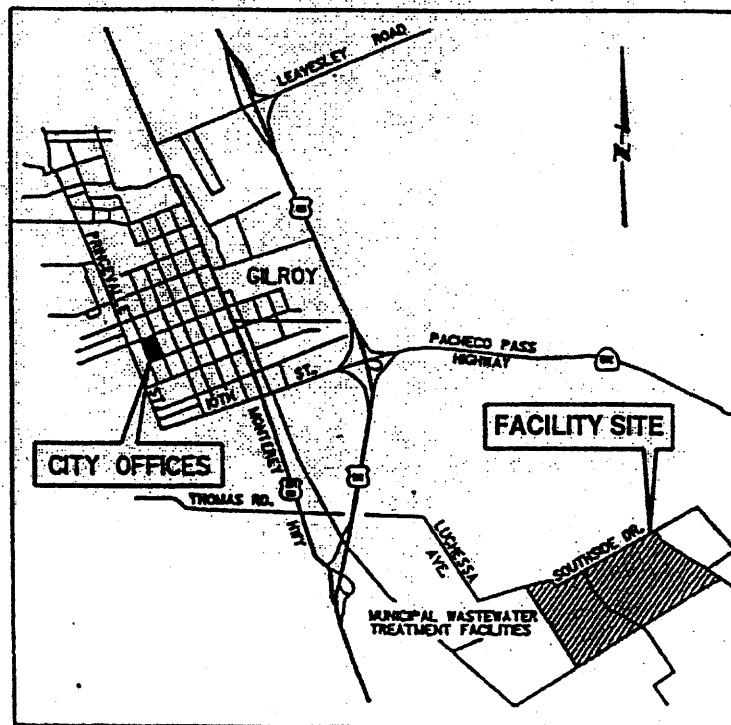
BPJ Regional Water Quality Control Board Staff's Best Professional Judgment

DHS California Department of Health Services, Drinking Water Field Operations Branch under authority of Title 22, Division 4, Chapter 3 -  
Water Reclamation Criteria

ROWD The Discharger's Report of Waste Discharge



**LOCATION MAP**  
NO SCALE

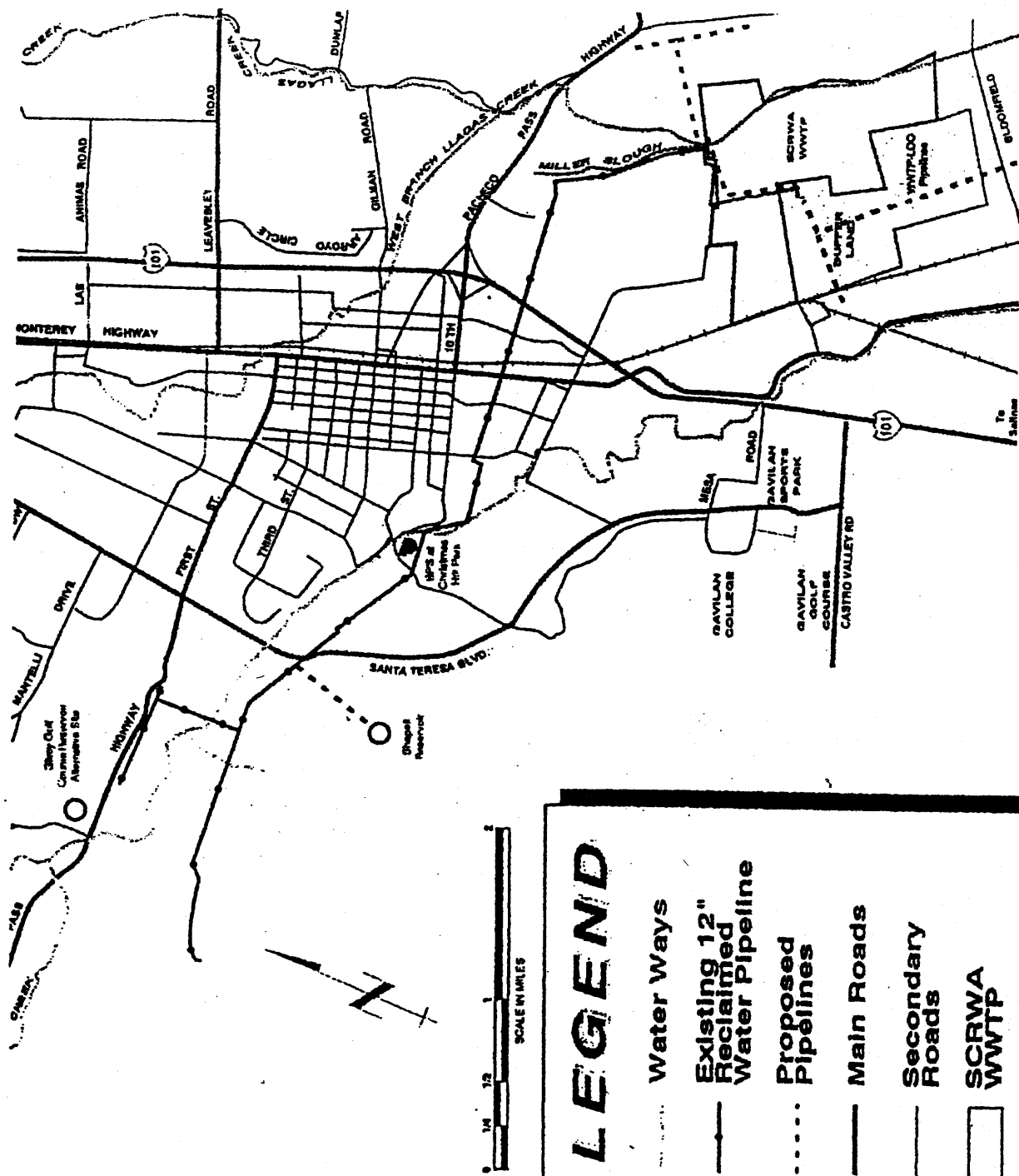


**VICINITY MAP**  
NO SCALE

SOUTH COUNTY REGIONAL WASTEWATER AUTHORITY  
TREATMENT/RECYCLING FACILITY LOCATION

**ATTACHMENT "A"**





# LEGEND

Water Ways

Existing 12" Reclaimed Water Pipeline

Proposed Pipelines

Main Roads

Secondary Roads

SCRWA WWTP

Attachment B  
Recycled Water Work Plan Study Area

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL COAST REGION**

**WATER RECLAMATION REQUIREMENTS  
MONITORING AND REPORTING PROGRAM NO. 98-052**

Waste Discharger Identification No. 3 430100003

**FOR  
SOUTH COUNTY REGIONAL WASTEWATER AUTHORITY  
AND  
INDIRECT USERS  
SANTA CLARA COUNTY**

**I. GENERAL**

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13268, 13383, and 13387(b) of the California Water Code. The principle purposes of a monitoring program by a Producer of recycled water, also referred to as self-monitoring program, are:

1. To document compliance with water recycling requirements and prohibitions established by this Regional Board; and
2. To facilitate self-policing by the Producer in the prevention and abatement of pollution arising from water recycling.

**II. RECYCLED WATER SAMPLING AND ANALYSIS**

The Producer shall document tertiary effluent quality under their regular facility Waste Discharge Requirements self-monitoring program (Order No. 98-053). Table MRP-1 contains a schedule for monitoring. For any instance where Table MRP-1 does not coincide with the facility's regular monitoring requirements, the more frequent monitoring will prevail.

**III. REPORTS TO BE FILED WITH THE REGIONAL BOARD**

**1. Violation of Requirements**

In the event the Producer is unable to comply with conditions of the water recycling requirements and prohibitions, the Producer shall immediately notify the Regional Board by telephone, then submit a written follow-up report within two weeks of the noncompliance. The written report shall include pertinent information explaining reasons for noncompliance and shall indicate what steps are being taken to prevent the problems from recurring.

**2. Annual Self-Monitoring Report**

An annual report for each calendar year shall be submitted to the Board by January 30 of the following year. The report shall include:

- a. Letter of Transmittal: A letter transmitting self-monitoring reports should accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the

Producer has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory.

The transmittal letter shall contain a statement by the Producer, or the Producer's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate, and complete.

- b. Tabulations of the result from each required analysis by Producer specified in Table MRP-1 (Attachment A) by date, time, type of sample, and station.
- c. A list of existing and new authorized recycled water Users, including the name, location, and projected annual flow to be delivered.
- d. Tabulation of inspection and observations reuse sites, including User's standard observations and random inspections by the Producer.
- e. A summary of effluent violations related to water recycling, violations found during inspection of reuse sites, corrective actions taken, and any changes to or revoking of User authorizations.
- f. An update regarding development of the South County Regional Wastewater Authority Water Recycling Workplan, including planning, design, and construction of facilities, and preparation of required reports and technical documents.

#### IV. STANDARD OBSERVATIONS

1. Evidence of runoff of recycled water from the site (show affected area on a sketch, and estimate volume).
2. Odor of wastewater origin from irrigation site: If present, indicate apparent source, characterization, direction of travel, and any public use areas or offsite facilities affected by the odors.
3. Evidence of ponding of recycled water, and/or evidence of mosquitoes breeding within the irrigation area due to ponded water.
4. Warning signs properly posted to inform public that irrigation water is recycled water, which is not safe for drinking.
5. Evidence of leaks or breaks in the irrigation system pipelines or tubing.
6. Evidence of plugged, broken, or otherwise faulty drip irrigation system emitters or spray irrigation sprinklers.

#### V. DESCRIPTION OF SAMPLING AND OBSERVATION STATIONS

##### 1. RECYCLED WATER

###### Station

###### Description

E-001

Location at South County Regional Wastewater Authority Treatment and Recycling Facility where a representative sample of treatment plant effluent being diverted for recycling can be obtained and total diverted flow can be measured.

2. LAND OBSERVATION STATIONSStationDescription

L-1 to L-n

Locations at a sufficient number of points at reuse areas in order to ensure compliance with water recycled requirements.

3. IMPOUNDMENT FACILITIESStationDescription

P-1 to P-n

Locations at points along the periphery of each storage, ornamental, golf course, or other pond or impoundment.

VI. SCHEDULE OF SAMPLING, MEASUREMENTS, AND ANALYSIS

1. The self-monitoring program is applicable during the periods when recycled water is in use. The Producer and Users are required to perform observations, sampling, measurements, and analyses according to the schedule given in Table 1 (Attachment A).
2. The Producer shall require the Users to conduct a complete inspection of all irrigation lines, sprinklers, and emitters at least once each year during the dormant season. A report of the findings of these inspections, including descriptions of any significant repairs or modifications made to the distribution systems, shall be submitted in the annual report (due January 30 of each year).

Ordered by: \_\_\_\_\_

  
Executive Officer

Date: \_\_\_\_\_

4-4-98

**ATTACHMENT A**

**TABLE MRP-1**  
**SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS**  
**South County Regional Wastewater Authority Water Recycling Program**  
**Water Recycling Requirements**

| SAMPLING STATIONS                         | E-1                | All L          | All P          |
|---|--------------------|----------------|----------------|
| Flow Rate (gallons/day)                   | Continuous         | Q <sup>1</sup> | Q <sup>1</sup> |
| Total Coliform (MPN/100ml)                | D <sup>2</sup>     |                |                |
| Turbidity (NTU)                           | Cont. <sup>2</sup> |                |                |
| Dissolved Oxygen (mg/l)                   | 3/W <sup>2</sup>   |                |                |
| Dissolved Sulfides (mg/l (if DO < 1 mg/l) | 3/W <sup>2</sup>   |                |                |
| pH (Units)                                | 3/W <sup>2</sup>   |                |                |
| Chlorine Residual (mg/l)                  |                    |                |                |
| Applicable Standard Observations          |                    | A <sup>3</sup> | A <sup>3</sup> |

- 1 Flow totals for each User will be compiled by the Producer on a quarterly basis. Daily average flow will be calculated from these quarterly totals and reported for each User in the Producer's annual report.
- 2 When producing recycled water.
- 3 Observations that the Producer requires each User to complete when recycled water is being used. The Producer will establish User self-monitoring requirements that depend on the size and complexity of each site, as a condition of each User's permit.

**LEGEND FOR TABLE 1****Type of Sample**

Grab = Instantaneous grab sample

C-24 = 24-hour composite sample

Cont. = Continuous monitoring (recorder)

Obs. = Observation

**Sampling Frequency**

D = Daily

3/W = Three times per week

W = Weekly

2/M = Twice per month

Q = Quarterly

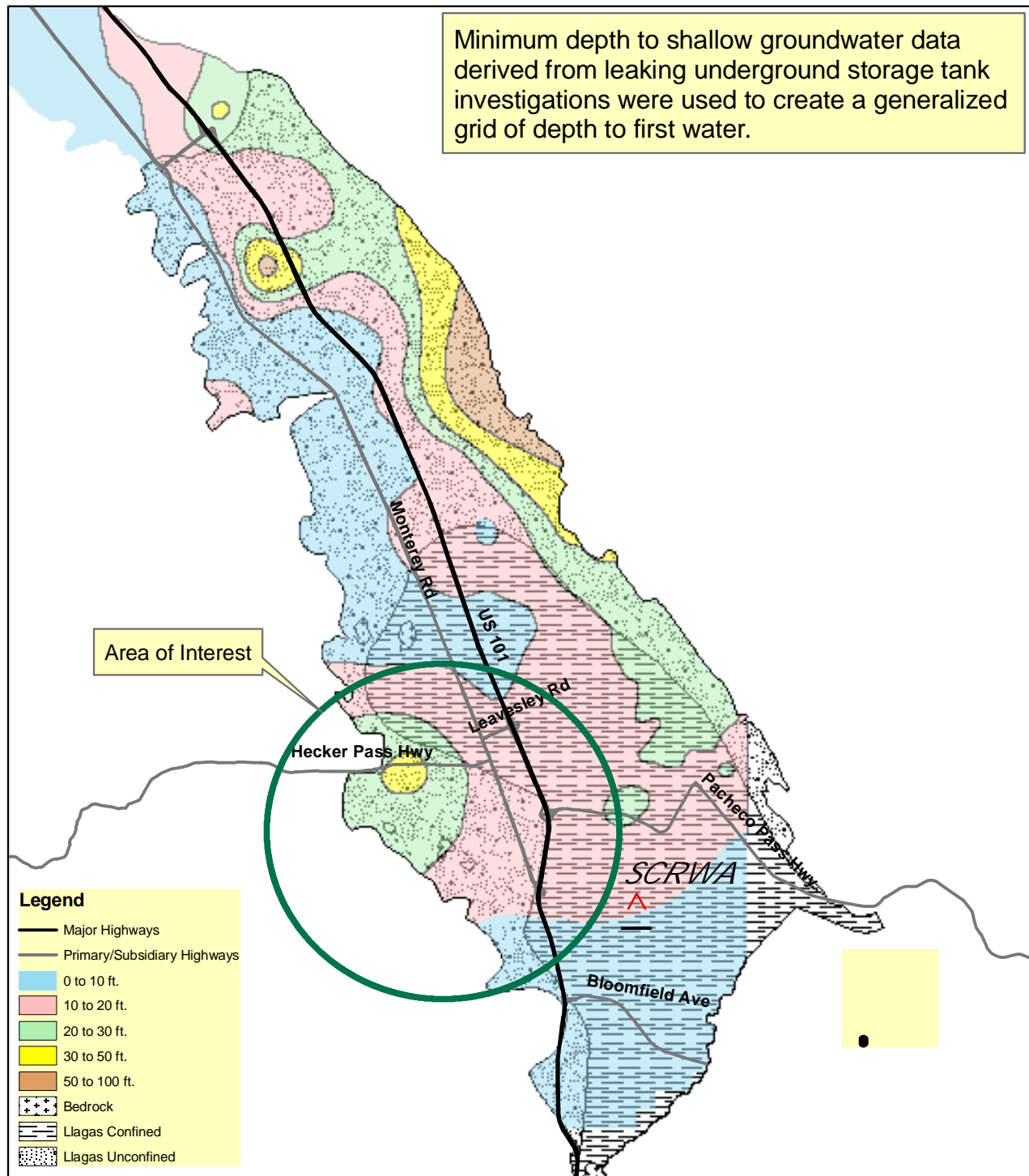
A = Annual

## **APPENDIX D**

**Depth to Ground Water and Well Location Plates Provided by  
the District.**



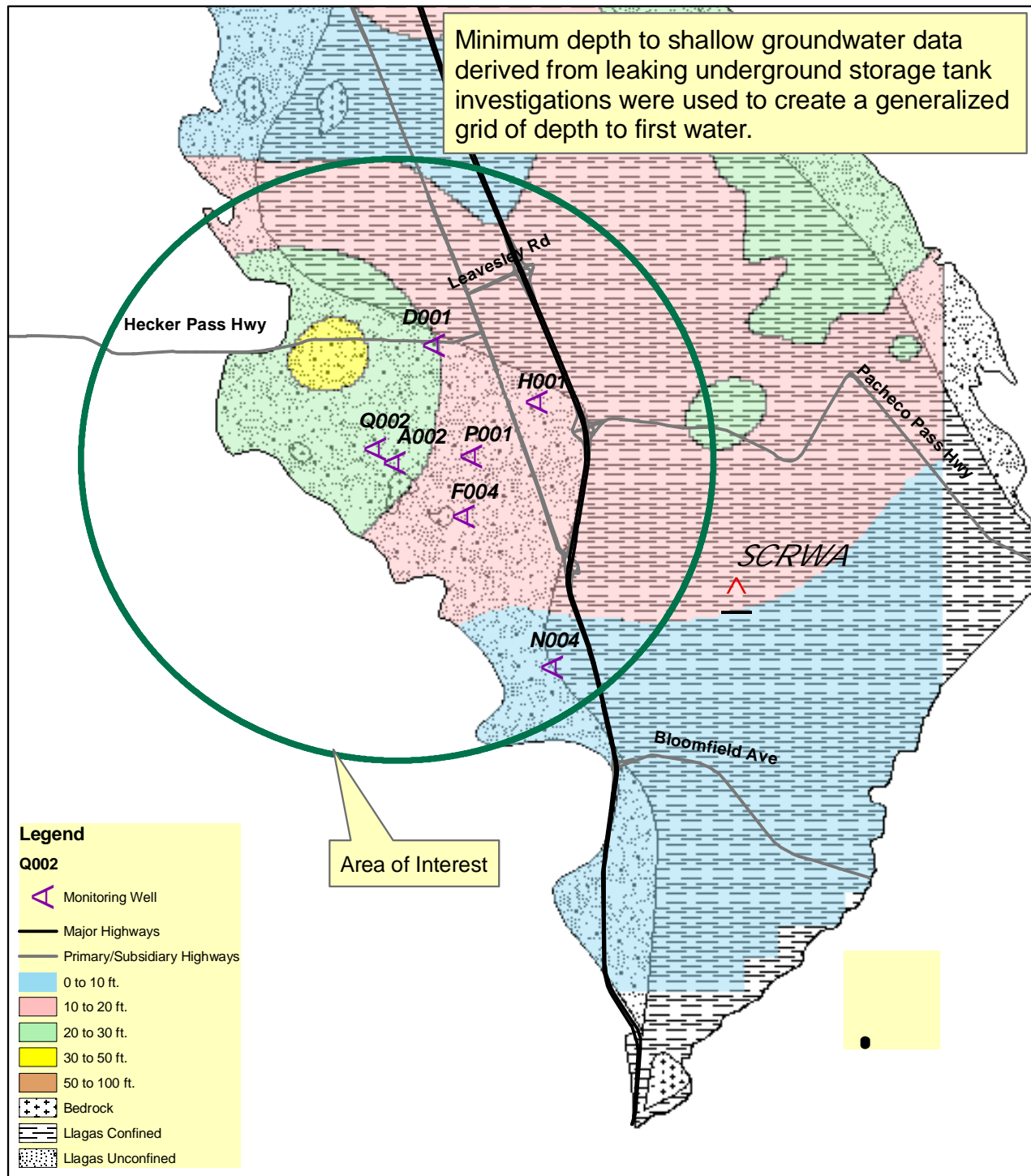
# Llagas Generalized Depth to First Water Map



Please note that these data are regional and general in nature. The Santa Clara Valley Water District (District) does not guarantee that the groundwater data presented accurately reflect conditions at any particular site or time. The District makes no guarantees or warranty, expressed or implied, as to the accuracy, timeliness, completeness, or adequacy of this data for any use or particular purpose. In consideration of the District making this information available, any user of the data accepts it as is and assumes responsibility for its use. User agrees to defend, indemnify and hold the District harmless from and against all damage, loss or liability arising from any use of the data. Groundwater data may vary greatly from site to site. A site-specific investigation may be necessary to determine site-specific conditions.

20,000 10,000 0 20,000 Feet

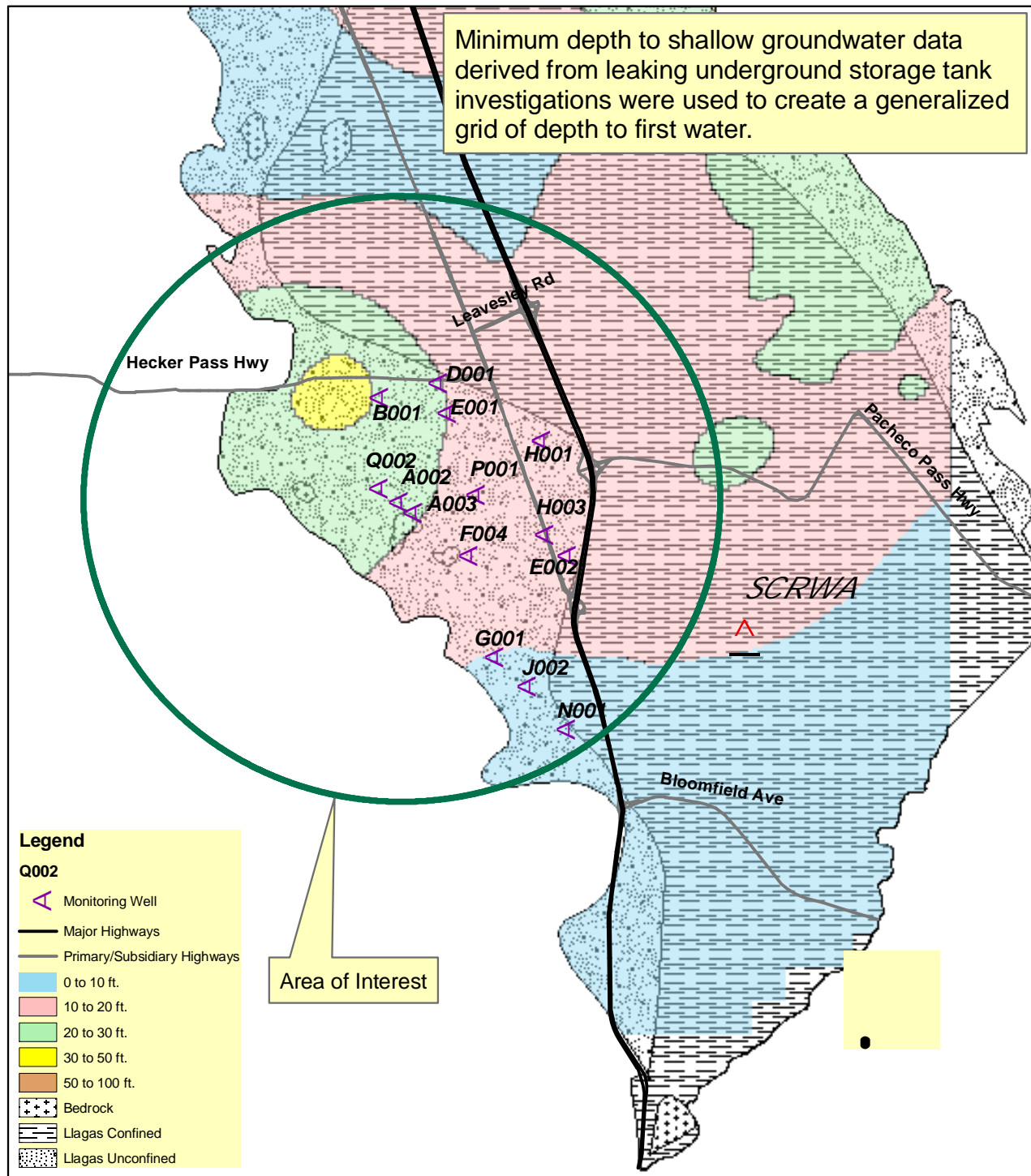
# Llagas Water Level Well Location Map



Please note that these data are regional and general in nature. The Santa Clara Valley Water District (District) does not guarantee that the groundwater data presented accurately reflect conditions at any particular site or time. The District makes no guarantees or warranty, expressed or implied, as to the accuracy, timeliness, completeness, or adequacy of this data for any use or particular purpose. In consideration of the District making this information available, any user of the data accepts it as is and assumes responsibility for its use. User agrees to defend, indemnify and hold the District harmless from and against all damage, loss or liability arising from any use of the data. Groundwater data may vary greatly from site to site. A site-specific investigation may be necessary to determine site-specific conditions.

11,000 5,500 0 11,000 Feet

# Llagas GW Analytical Well Location Map



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11,000 5,500 0 11,000 Feet